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*Mississippi*  
**STATE MEDICAL ASSOCIATION**

## VOLUME VII

January-December, 1966

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735 Riverside Drive  
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When  
tetracycline  
is indicated in  
these candidate  
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January 1966

Dear Doctor:

American medicine has been meeting overtime on the crucial matter of fiscal intermediaries under Part 1-B (physicians' services) of Medicare. In neighboring Alabama, state medical society turned thumbs down on Blue Cross-Blue Shield and endorsed commercial carriers.

In special session, MSMA's House of Delegates voted December 16 to have association serve as fiscal intermediary. Social Security Administration will soon announce appointment of physicians' representatives from among applicants including insurance companies, Blue plans and state societies.

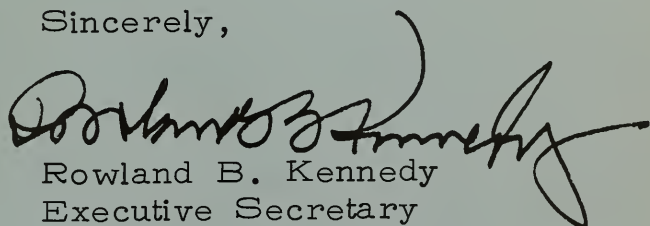
The D.O. with the unearned M.D. degree is a "snare and a deception," says the Medical Society of the State of New York. Obviously referring to the osteopath-to-physician program in California, MSSNY officials called the D.O.-turned-M.D. a fraud perpetrated upon the people. California law permits D.O.'s to apply for medical degree.

The U.S. Food and Drug Administration is faced with restaffing its top leadership with seven vacancies now existing. Jobs of commissioner, deputy and two assistant commissioners, associate commissioner for science, and directors of Bureaus of Drug Abuse and Veterinary Medicine are without incumbents. Secretary of HEW has responsibility of making new appointments which medicine will watch closely.

High on congressional agenda as 2nd Session of 89th Congress convenes is S. 2568 by Sen. Hart forbidding dispensing by physicians. Aimed primarily at ophthalmologists, the measure also forbids any physician from realizing a profit in the dispensing of any drug or device to a patient. Bill applies only to medical practice.

Full division status has been given the State Board of Health's Tuberculosis Control Unit with substantial expansion anticipated in the future. Division director is Dr. J. T. Hamrick, and Dr. Lee R. Reid is full-time medical consultant in tuberculosis and chest diseases. A new patient evaluation service is planned.

Sincerely,

  
Rowland B. Kennedy  
Executive Secretary

*Miss [unclear]*





## DATELINE - MEDICAL AMERICA

### NFIB Finds Growing Support In U.S. For Metric System

San Mateo, Calif. - The inch is no cinch for survival in a world of meters and grams. So says the National Federation of Independent Business after completing a survey among American businessmen on attitudes toward the U.S. converting to the metric system. Supporting the change are 41 per cent of businessmen with 54 per cent opposing and 5 per cent undecided. Change would be a boon to medicine, already metric-oriented.

### Auto Industry Blue Shield Program Is In High Gear

Detroit - The new Blue Shield contract for auto workers of the big three, Chrysler, Ford, and General Motors, is being implemented in 47 plan areas with new and expanded benefits. Contract pays \$400 annually for psychiatric care, has no maternity waiting period, allows physician visits in convalescent facilities up to 730 days, and eliminates deductibles.

### Health Hazards Of The White House Are High

Atlanta - Two Emory University medical researchers have concluded that the U.S. Presidency is too great a health risk for any one man to take, particularly if he is emotionally unprepared. They argue that the Vice President ought to be chosen from among active campaigners for the Presidency, seeming to exempt LBJ from study conclusions. Presidential mortality runs 50 per cent in the 20th century: Out of 10 Presidents, four died in office and one later of cerebrovascular disease suffered while in the White House.

### NLN Will Accredite Public Health Nursing

New York - The National League for Nursing is instituting a new accreditation program for public health nursing on January 1. Activity has full support of the American Public Health Association. The new NLN function recognizes that there will be a vast expansion of public health nursing in home health services phases of Medicare, and APHA has urged accreditation as a means of upholding quality of nursing services as programs mushroom in every state. NLN's new program is the first such plan for any nursing service.

### Pharmaceutical Industry Will Appeal 'Generic Name' Ruling

Washington - Eleven plaintiff drug makers and the Pharmaceutical Manufacturers Association plan to go to the U.S. Supreme Court to appeal the "generic name every time" ruling of the Third Circuit Court of Appeals. Ruling overrode district court which held that drug makers did not have to state generic names of products in every presentation of brand name in labeling, promotion, or advertising.



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1—Pomeranze, J., and Gadek, R.J.: Am. Pract. & Digest Treat. 8:73-77 (Jan.) 1957

2—Asher, L.M.: Am. J. Digestive Diseases 4:272 (Apr.) 1959

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## No Rate Hike by Blue Plans in FEP

There will be no rate increase for those with Blue Shield and Blue Cross coverage in the Federal Employee Program, despite the fact that 20 of the 37 participating carriers have announced rate hikes for 1966.

The FEP is the voluntary health and medical program for civilian employees of the federal government. Under the program, the government pays a portion of the premium costs, while the insured employee pays a share which is greater. There is free choice of physician and hospital.

The Blue plans cover 56 per cent of the 2.2 million government employees participating in the program, according to Joseph E. Harvey, director of the Blue Shield and Blue Cross portion of FEP. It is said to be the largest single voluntary prepayment group in the world.

The coverage, however, has been progressively improved with mounting experience since inception of the program five years ago. Effective this year, 21 of the 37 approved plans upped benefits to include better coverage for care of nervous and mental conditions.

## AMA Health Information Widely Distributed

More than 31 million pieces of literature, mostly related to health information and education, have been distributed by the American Medical Association so far this year.

This is more than twice the amount distributed in 1964, the AMA said.

Steadily increasing requests indicate that AMA literature plays a significant role in schools, conferences, health improvement efforts, careers days, and for individual information, said F. J. L. Blasingame, M.D., AMA executive vice president.

Some of the more popular items:

An emergency medical identification card, a family health record, and the pamphlets, "Until Your Physician Comes," "Smoking: Facts You Should Know," and "First Aid Manual."

More than 80 pamphlets and two sets of 12 full-color posters are available from the AMA. A small charge is made to defray costs of mailing and printing some items. For a list of publications, write to the Circulation and Records Department, American Medical Association, 535 N. Dearborn St., Chicago, Ill. 60610.

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## ORIGINAL PAPERS

## The Treatment of Burns

O. GORDON ROBINSON, JR., M.D.; HEBER C. ETHRIDGE, M.D.,  
and JAMES H. HENDRIX, JR., M.D.

Jackson, Mississippi

ON FIRST ENCOUNTER with a burned patient, several important facts can be gleaned from an adequate history. Of major importance are the mechanism of injury and the time sequence. Although there are exceptions, burns with hot liquids such as coffee, soup, water or steam produce partial thickness burns which will, if treated adequately, require no skin replacement and can be managed conservatively.

On the other hand, burns due to hot grease or tar will usually be of full thickness and will probably require more extensive management and skin grafting. The liquids, although hot when initially contacting the skin surface, tend to cool rapidly. Grease and tar are slower to cool, and therefore the heat is in contact with the skin surface for longer periods of time and usually produces burns of full skin thickness. The length of time elapsed since the patient was burned is of importance in the early fluid management which will be brought out later.

## EXAMINATION

Next in order is a careful physical examination and appraisal not only of the area and depth of the burned surface but also of concomitant injury which may be life threatening. An evaluation of the age and general physical condition of the patient is also important.

From the Plastic Surgery Section, Department of Surgery, University of Mississippi School of Medicine.

In calculating the per cent of body surface burned, the rule of nines devised by Pulaski and Tennon is generally used at the University Medical Center. The body may conveniently be divided

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*At this time of year, particularly in the lower economic areas of the South, practitioners treat a tremendous number of burned patients. This summary of methods used on the Plastic Surgery Service at the University of Mississippi Medical Center is designed primarily for the physician who sees burns infrequently but who is called upon to handle some cases, at least in the initial phases of treatment. However, the authors hope that the Medical Center experience will be helpful to practitioners who are more familiar with the total management of the burned patient.*

---

into areas representing 9 per cent or multiples of 9 per cent of the total surface.

Head and Neck .....	9%
Anterior Trunk 2 x 9 .....	18%
Posterior Trunk 2 x 9 .....	18%
Each Lower Extremity .....	18%
Each Upper Extremity .....	9%
Perineum .....	1%

This classification must be adjusted somewhat in children under 10 years of age. At birth and



until about the age of 10 the head is disproportionately large, and the lower extremities are disproportionately small. At birth the head accounts for 19 per cent instead of 9 per cent of the total surface area and each lower extremity is valued at only 13 per cent. For each year of age simply subtract 1 per cent from the head and add 1 per cent ( $\frac{1}{2}$  per cent for each) to the lower extremities. For example, a child of 4 years would have 15 per cent of his body surface for head and neck while the lower extremities would represent 15 per cent each.

### DEPTH OF BURN

On initial examination, the depth of a burn is extremely difficult to determine in some cases, but it will become manifest later. Early management is essentially the same in any case.

**First Degree**—simple erythema as is seen in sunburn. This requires very conservative treatment the most essential part of which is gentle cleansing with soap (pHisoHex) and water.

**Second Degree**—superficial partial. This type of burn, an example of which is blistering from sunburn or hot water, heals spontaneously in 10-14 days and again requires only cleansing.

**Second Degree**—deep dermal. This burn extends into the corium, below the stratum germinativum and is of a more serious nature than the superficial partial burn. This burn may also heal spontaneously with adequate treatment in 25-35 days. The re-epithelization takes place from the lining of sweat glands and hair follicles. In the presence of infection the deep dermal burn frequently is transformed into full thickness loss and may require skin grafting or if it heals, it heals with thick scars. When occurring on the hands, the deep dermal burn is associated with hypertrophic scarring which may require initial or later excision and grafting.

**Third Degree**—when the depth of the burn extends through the full thickness of skin such as seen in flame burns. There may be white areas insensitive to pin prick with evidence of superficial vein thrombosis or actual charring. It is with this type of burn that this paper is concerned.

### DISPOSITION OF PATIENT

Of primary concern at first is the presence and maintenance of an adequate airway. The physician must be cautious about burns of the head and neck. Careful examination of the oropharynx may reveal burn erythema or edema, or burned nasal hairs (vibrissae) may be present. These are

indications certainly for tracheotomy in patients with burns of the head and neck. One should consider strongly doing a tracheotomy in questionable cases of head and neck burns if the patient is to be transported for some distance. A note about tracheotomy in small infants and children: These are difficult to perform and should be done, if possible, while the patient is under general anesthesia over an endotracheal tube. It is difficult to wean an infant from a tracheotomy tube because of the scarring in the already narrow traches. This should not be of consideration, however, if there is questionable airway obstruction.

If the burn is minor (less than 15 per cent in an adult or less than 10 per cent in an infant) and does not involve a critical area such as the face or hands, the individual may be treated as an out-patient. If the burn involves more than 15 per cent in an adult or 10 per cent in an infant, the patient should be admitted to the hospital.

**Intravenous life line.** We feel it is better to use a polyethylene cannula. Blood can be drawn during this step for hematocrit-hemoglobin, base line BUN, electrolyte and type and cross-match determinations.

**Indwelling catheter.** We begin immediately to determine the hourly urine output which should be maintained at 30-50 cc. per hour in an adult. Adjusting the rate of infusion can regulate the urinary output.

**Sedation.** We use intravenous morphine sulfate 8-10 mg. in an adult, 1 mg/10 lbs. in a child. Intramuscular injections should never be given because of the unstable blood volume and the presence of shock or edema. The medication may not be absorbed if given I.M. until a later time when the edema fluid begins to mobilize and then may be in overdose amounts due to the previous accumulation of several injections.

**Antibiotics.** We place all burned patients on prophylactic antibiotics for several days, usually penicillin if there is no allergic history.

**Tetanus Prophylaxis.** We give tetanus toxoid if the patient has been previously immunized and both toxoid (0.5 cc.) and TAT (4500 units) if he has not been previously immunized. If he is sensitive, we may give human antitoxin.

**Fluid requirements.** Here we use the formula popularized at the Brooke Army Burn Center. Colloids (dextran) 0.5cc/kg/% burn; electrolyte solution (lactated Ringer's) 1.5cc/kg/% burn; maintenance fluid 2000cc. of 5 per cent dextrose in water for an adult. The usual maintenance is used for children and infants. Burns greater than 50 per cent of the body surface are calculated as 50 per cent. One-half of the above



calculated fluids are to be given in the first eight hours after burn, one-quarter during the second eight hours, and one-quarter during the third eight hour period.

During the second 24 hours post burn, one-half the calculated amount of colloid, one-half the



*Patient, left, is shown with a large area of third degree burn. Right, same child after large split thickness skin grafts have been applied.*

calculated amount of electrolyte solutions and the whole maintenance amount should be given.

At the end of 48 hours post burn the edema is at its maximum and diuresis begins. The fluid requirement diminishes sharply after 48 hours due to the mobilization of tremendous amounts of edema fluid. The urine output will increase dramatically and may approach 80-100 cc/hr. At this point one must use caution in administering intravenous fluids for fear of overloading the cardiovascular system and the daily maintenance of 2000cc. only should be administered. At this point also the patient may begin to take oral feedings.

The previously mentioned formulas should be only a guide to fluid therapy and not be taken as the absolute requirement. The rate and amount of infusion should be adjusted to maintain the urine output at 30-50cc/hr during the critical first 48 hours in an adult and checked frequently along with the hematocrit determination. The urine output serves as a useful guide to adequacy of fluid replacement.

We sometimes use whole blood initially instead of dextran. If dextran is used initially, then large amounts of whole blood are required later to restore and maintain an adequate blood volume. Lesser amounts of whole blood are required later if blood is used as the originally calculated colloid. We try to maintain the hematocrit at 45 per cent.

**Local wound care.** It is usually not necessary to do extensive debridement of the early burn. Under i.v. morphine analgesia the obvious necrotic tissue is gently removed and the areas washed with pHisoHex and saline under sterile conditions.

There are two perfectly acceptable methods of handling the patient at this point. He may be left exposed on sterile sheets with sterile sheets over a heat cradle or similar apparatus, or occlusive dressings may be used. For occlusive dressings we use a single layer of Furacin impregnated silk or fine mesh gauze upon which is placed a bulky substance such as ABD pads or other absorptive dressings. We then wrap the above with Kerlix roll and Ace bandages or bias cut stockinette. The hands are placed in the position of function with fingers separated and placed in a snug occlusive dressing such as the above.

Our usual method is to dress the extremities and leave the trunk exposed. The face is never dressed and the hands are almost always dressed. We treat children almost entirely by the use of occlusive dressings.

When there is extensive burn around the face and eyelids, a simple horizontal mattress suture or two of 6-0 silk is taken through the upper and lower lids to keep them closed after the application of antibiotic ointment, or more permanent type adhesives may be done if the lids are burned deeply.

**Transporting the burned patient.** The burned patient tolerates transportation well in the first 48 hours post burn and even better in the first 24 hours. It is a misconception that burned individuals should not be transported, and the chance for survival in a critically burned patient is much better if he is sent to a center familiar with handling of such cases. The critically burned patient should have a medical escort and he must have the benefit of an intravenous cut-down and a Foley catheter. Lactated Ringer's solution or dextran should be administered during the trip as well as sedation. A tracheotomy should be done if indicated.

As previously stated, many burns of minor degree, even though full thickness, may be treated on an outpatient basis. We do this satisfactorily with twice weekly dressing changes and gentle debridement. A full thickness burn will usually be ready for grafting at 14-21 days, and the patient can be brought into the hospital at that time for definitive treatment.

## DEFINITIVE TREATMENT

The object of adequate treatment of the burned patient is skin coverage, the earlier the better. The exudate of a partial thickness burn dries in 48-72 hours. This forms a protective covering and as the area re-epithelizes, usually in 14-21 days, this falls off and leaves behind a healed surface. Full thickness burns have little or no exudate produced and as the dead surface dehydrates there is produced an eschar which also serves as a protective cover until liquefaction occurs beneath it and slough begins to occur in 14-21 days.



*Patient, left, is shown with a large area of full thickness burn of the face. Right, good results from large sheets of full thickness skin are shown.*

The tough eschar is relatively impermeable to bacteria and serves as protection until it begins to slough by liquefaction. At this point it should be removed by mechanical means because bacteria may invade through the cracks and crevices thereby produced. A certain amount of infection is present under the eschar of full thickness burns due to the bacteria present in hair follicles and sweat glands but these bacteria, at least for a time, do not thrive.

The eschar may be recovered piecemeal as it separates by debridement, wet soaks or frequent change of dry dressings, all of which we employ during our treatment. Surgical debridement may be used even though the eschar has not begun to separate if not too large an area is involved and bleeding is not severe.

## THE RECIPIENT SITE

When the burn eschar has been separated by either of the former methods, and healthy granulation tissue is manifested by bright red areas

which bleed easily, then the burn is ready for grafting.

The so-called "golden period" for grafting is within the first 30 days post burn. During this time all conditions being suitable, split thickness skin grafts usually thrive. After 30 days, the incidence of re-grafting and poor take increase sharply.

When the granulating bed is unhealthy, thick, heaped-up, and pale, it should be scraped down with adequate blood replacement, re-dressed, and grafted several days later. We do this with a scapel handle.

## GRAFTING

**Donor site.** The donor site is prepared by shaving the area with a razor then washing with pHiso-Hex, saline, and irrigating with aqueous Zephirin. If possible, a graft should not be taken from exposed areas but usually in a large burn this is of no particular consequence.

**Cutting the graft.** There are predominately three methods for obtaining split thickness skin grafts.

(1) The electric dermatome (Brown) is perhaps the simplest to use and is employed in large burns where covering is the major concern. The graft is usually not of uniform thickness being thin at its edges.

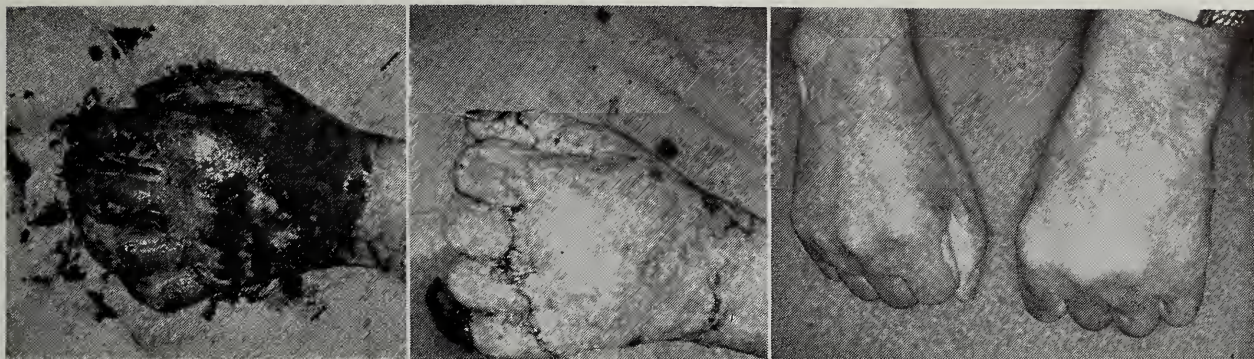
(2) The rotating drum of the Padgett type is more difficult to use but cuts a more uniform graft. We use this dermatome almost entirely for grafting the face, hands, genitals, and flexion creases. This type of dermatome in general should be used only by those more skilled in the field.

(3) The free-hand knife (Blair-Brown) or simply a sterile razor blade can be employed for small areas of skin deficit.

The donor site is treated initially with a wet sponge, dressed with fine mesh or thin silk which may be impregnated with Furacin. Over this a dry dressing may be placed. All layers except the first are removed in 24-48 hours allowing the donor site to dry on exposure to the air. The single layer of Furacin silk or fine mesh gauze then separates spontaneously in several days. If the wound does not dry, we remove everything and apply Furacin gauze or silk. Healing will usually then proceed normally.

The graft is sutured into position with either fine silk or catgut when grafting the face, hands, genitals or flexion creases. For flat surfaces such as the trunk or extremities, the grafts are usually laid on and secured with pressure bandages of Furacin impregnated silk or fine mesh gauze, ABD pads in several layers, or the so-called





*Full thickness burn of the dorsum of the hand, left, showing healthy granulation tissue and ready for grafting. Center, hand of the same patient fol-*

*lowing large sheet grafting with split thickness skin. Right, patient's hands are shown with good functional and cosmetic result.*

Brooke burn dressing, Kerlix roll and Ace bandages.

These lay-on grafts may be left exposed, however, under a single layer of silk or fine gauze especially if they are placed on non-flexion areas such as the trunk.

Only if the area to be grafted is quite extensive are the postage stamp size grafts used and then only on flat surfaces. There are left small areas of granulations between the grafts. In time the postage stamp grafts will bridge the defects left and become confluent. This type of grafting is cosmetically and functionally the least acceptable but becomes a necessity when there is a sparsity of donor site skin. The grafted area may be left exposed or dressed as mentioned above.

#### CARE OF GRAFTS

The more frequent causes of graft slough are motion, hematoma and infection in that order. The grafted area should be immobilized by pressure dressings, splinting the region, and by the use of adequate sedation.

All hematoma are removed prior to the patient leaving the operating room initially and on each subsequent dressing change. The area should be inspected frequently if there is any doubt about adequate hemostasis.

The most lethal organism to a skin graft is the beta-hemolytic streptococcus. Grafts will survive staphylococcus or pseudomonas infection with adequate cleansing but the streptococcus causes a dissolution of the small fine split grafts. For this reason we place all recent skin grafted patients on penicillin if there is no allergic history and change the type of antibiotic frequently.

Our patients are taken to the operating room twice weekly and under general anesthesia or analgesia the dressings are changed and the grafted areas are cleansed with pHisoHex solution and saline or Zephiran solution. The same type of dressing is reapplied for several changes until the grafts have a good growth, usually about 10-14 days. Further grafting is done during these dressing changes as indicated.

After the second or third dressing change following complete take of the grafted areas we begin twice or three times daily tub baths with warm water or whirlpool. The patients are ambulated at this time.

#### AFTER CARE

The patients are instructed to keep the skin grafted parts scrupulously clean with soap and water. Lubriderm or Lanolor is useful to prevent the itching which accompanies the healing and drying process.

#### LATE SEQUELAE

Burns with grafting in the flexion areas of the body such as the anterior neck, axillae, elbows, and posterior knees are frequently associated with contractures. These are released by means of Z-plasty or excising and further grafting after approximately six months at which time the scars have softened. This type of procedure usually should be confined to centers dealing more often with the burned patient.

We are watching reports and using on a small scale silver nitrate 0.5 per cent as presently advocated by Moyer. We have not been sufficiently impressed with it so far to abandon our other methods.

★★★

2500 North State St.



# Radiologic Seminar XLV: Lymphangiography

LLOYD G. BERRONG, M.D.

Jackson, Mississippi

LYMPHANGIOGRAPHY BEGAN its present ascendancy in 1952, when Kinmonth<sup>1</sup> developed a successful method for outlining the lymphatics with a dye, and was then able to cannulate them, inject a radiopaque contrast material and record on radiographs the appearance of normal and abnormal lymphatics. In subsequent years many areas of investigation and evaluation were entered and a great deal of information was recorded. A critical evaluation of lymphangiography in general, including the studies performed in their respective departments and an excellent bibliography, has been recorded by Fischer<sup>2</sup> and Schaffer.<sup>3</sup>

The technique employed today is essentially the same as outlined by Kinmonth in his original article. Intradermal and subcutaneous injection of equal parts Evans Blue (or Brilliant Blue) and a local anesthetic agent (1 per cent Xylocaine) is given 30 to 45 minutes prior to actual dissection. Using the lower extremities as examples, the dye-anesthesia combination is injected in the web of the first-second and second-third toes. Two cubic centimeters are injected. An incision is made on the dorsum of the foot at about the level of the tarsal-metatarsal junction. The afferent lymphatics are dissected, and a 27 to 30 gauge needle is used to cannulate one of these vessels. The needle is connected to a glass syringe by polyethylene tubing, and Ethiodol, an ethyl ester of poppy-seed oil containing 37 per cent iodine, is injected at the rate of 0.1 to 0.2 cc. per minute for a total of 10 to 12 cc. per extremity. Films are made as soon as the injection is completed and also at 24 hours. Interpretation is rendered only after a study of the 24 hour films and not infrequently requires a study of 48 hour films.

There are many applications of lymphangiography, but one of its most valuable uses is in diagnosing, staging, and follow-up evaluation of the lymphoma group of malignancies. From the diag-

nostic standpoint, the studies on this group of patients have shown good correlation between the histologic and radiographic appearances of lymph nodes involved by lymphoma.

Malignant lymphoma often presents as a local disease, yet in reality it may be only the first detected manifestation of a protean pathologic process. The distribution of the disease varies greatly. The multicentric nature of lymphomas, following as it does the chains of nodes, are frequently inaccessible to the usual parameters of examinations. The retroperitoneal lymph node involvement appears to be one of the major areas of occult disease and is inaccessible to the usual examination. Recognition of these occult areas is obviously vital to staging and therapy.

The pattern seen radiographically of nodes involved by lymphomas is rather characteristic. Wallace<sup>4</sup> and Greening<sup>5</sup> have described the changes as being a general increase in size and number. The internal architecture appears foamy with a lacy pattern producing an almost ghost-like picture. An important observation is the preservation of the outer, marginal sinusoids and there is more or less preservation of sinusoids within the node.

The illustrations presented in Figures 1 and 2 represent a study of normal lymphatics. In the inguinal region, multiple fine afferent lymphatics may be seen entering the node, and the larger efferent lymphatics are demonstrated leaving the hilus. The node has a rather homogeneous reticular pattern with a well-defined margin. The nodes in the inguinal and pelvic area have conveniently been grouped into what is called the ilio-inguinal nodal system. There is cross-over of lymphatics at the level of the upper sacrum. The nodal system continues as the para-aortic nodes which drain into the cisterna chyli at about L<sub>2</sub>. The pelvic and lower para-aortic nodes are well demonstrated on the normal study presented (Figures 1 and 2).

Figures 3 and 4 demonstrate the characteristic radiographic pattern seen in lymphomatous nodal disease. One may readily see the gross enlargement and the increase in number of nodes. Note the foamy, lacy pattern created by contrast me-

Sponsored by the Mississippi Radiological Society.  
From the Department of Radiology, the University of Mississippi School of Medicine.



Figure 1. This 37-year-old Negro female was to undergo an abdominal hysterectomy for a Stage I carcinoma of the cervix. Lymphangiography revealed normal appearing afferent lymphatics in the lower extremity.



Figure 2. The ilio-inguinal nodes are normal in appearance, and those removed at time of surgery revealed no pathology.

dium as it enters the enlarged sinusoids and is retained by the reticulo-endothelial cells. The marginal sinusoids are intact and thus the nodes present a ghost-like appearance. The value of the study for staging is apparent, as well as helping to dictate the therapeutic approach. Follow-up studies can be used to assess the results of therapy. It is believed that in the malignant lymphomas, lymphangiography serves a diagnostic value second only to the biopsy. It plays an even more important role in staging, therapy, and long-term follow-up.

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Figure 3. This 74-year-old white male presented to his physician with an enlarged node in the left neck. A biopsy from the neck revealed a malignant lymphoma. Lymphangiography demonstrates a classical radiographic appearance of the ilio-inguinal nodes. The study is a good example of the diffuse nature of the disease although presenting only as a localized area of pathology.



Figure 4. This 58-year-old Negro male presented with swelling in the right groin of about four months' duration. Lymphangiography revealed ilio-inguinal nodes classically demonstrating the changes due to a malignant lymphoma.

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# The Orthopedic Aspects Of Low Back Pain

FRED P. SAGE, M.D.

Memphis, Tennessee

THE DIAGNOSIS of painful low back conditions depends on a working knowledge of the anatomy of the low back, of the conditions which cause low back pain, a careful history of the illness, a thorough physical examination, and adequate roentgenographic examination. With these, a reasonably accurate diagnosis can be made in at least 95 per cent of the cases on the first evaluation, without resorting to hospitalization or more sophisticated evaluation.

The general diagnostic categories into which fall the causes of low back pain are trauma, which may be acute or chronic, inflammatory or infectious lesions, congenital or developmental abnormalities, metabolic disturbances and neoplasms. All of these conditions may lead to chronic traumatic disease such as osteo-arthritis or traumatic arthritis.

## TRAUMA

The most common etiology for low back pain is trauma, either acute or chronic. The low back joints, with their restraining capsules and reinforcing ligaments and muscles, are all subject to sprains, strains, and tears. The chief complaint following such an injury is one of pain, and the pain is localized to the area of sprain or strain. There is often protective muscle spasm and a list to the side of the injury. Onset of the discomfort is usually immediate at the time of an exaggerated or sudden unguarded motion, and the pain is usually on the opposite side from which the body was bent at the time of the injury. The muscles which have gone into protective spasm may be

diffusely tender or tender at their origin of insertion into bone. Bending the trunk to stretch the area of sprain or strain causes pain at the site of injury or along the tight muscles.

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*The causes of low back pain are the same as the causes of painful conditions in most other joints. The author discusses the more common conditions in the large diagnostic categories including trauma, inflammatory or infectious lesions, congenital or developmental abnormalities, metabolic disturbances and neoplasms. He considers history, physical examination, roentgenographic examination and treatment.*

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Neurological evaluation is normal and roentgenographic examination is often normal in a young person except for a lateral or anteroposterior curvature of the spine caused by the protective muscle spasm. If the area of maximum tenderness is injected with a local anesthetic, such as 1 per cent Xylocaine, there is usually immediate relief; this may be lasting if 25 to 50 mg. of Compound F or Hydrocortone is injected into the area.

Strains and sprains in the back need to be protected as do other joints and soft tissues. Initially bed rest, muscle relaxants, mild sedation, and moist heat applied to the area four times daily for not over an hour each period are all that are needed. If after 48-72 hours muscle spasm persists, then pelvic traction of 15-20 pounds and light massage to the spastic muscles are of benefit. If the discomfort or muscle spasm persists in spite of these measures, a short course of a low dosage

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of a steroid such as prednisolone or a phenylbutazone compound may alleviate the pain and spasm. Once these have been eliminated, the sprained or strained area needs some protection such as restricted activity or corset protection for approximately three weeks until soft tissue healing has occurred. After three weeks a gentle back exercise program of essentially isometric contraction of the long muscles of the back, hips, and abdomen should be done to build up musculature atrophied during pain, enforced rest and inactivity.

## COMMON SPRAINS

The two more common areas in men subjected to sprains and strains are the sacrospinalis muscle masses on either side of the spinous processes and the iliolumbar ligament at its attachment to the fifth transverse process or to the wing of the ilium. In women the iliolumbar ligament is at times sprained, but more commonly they sustain strains to the capsule of the sacroiliac joints from ligamentous laxity. An excellent support for the sacroiliac joint is the ordinary commercial girdle that most women have in their wardrobes but wear for only dress-up occasions.

The greater the degree of trauma, the greater the soft tissue damage; and tears and lacerations of the ligaments, muscles and fascia do occur. With such, however, pain is instantaneous and severe. Three to four days after the injury, ecchymosis may show in the skin. Such lesions need to be protected longer for healing to occur, usually from 9-12 weeks, but the initial treatment is the same as for the lesser injuries.

## HERNIATED NUCLEUS PULPOSUS

The most common lesion due to trauma which causes low back and leg pain is of course the herniated nucleus pulposus or disc. The restraining fibers of the annulus fibrosus which contain the disc within its normal limits may be weakened by age or degenerative changes and even mild trauma may cause a tear in such an annulus. The history is usually characteristic with an onset while bending over or straightening up from the trunk-flexed position with or without a load. There is usually immediate pain and within a few hours the pain begins to radiate down one or less commonly both legs. The leg may develop paresthesias of tingling, numbness, or burning in the area where the nerve root involved supplies skin sensation. The skin may be hyperesthetic as well. The patient walks bent slightly forward with the normal sway back in the lumbar area flattened. He may list to

one side, usually the side opposite the disc rupture.

The pain is increased by anything which causes an increase in the intraspinal pressure such as laughing, coughing, straining at stool or sneezing. He is usually more comfortable lying on his side or back with his hips and knees flexed. Seldom is comfort achieved lying on the abdomen or the back with the hips and knees straight or extended. There is seldom bladder or bowel difficulty unless the protrusion is in the midline of the low back. If the condition has existed for several days, the patient may notice some weakening in the painful leg or foot. On physical examination there is muscle spasm in the lumbar paravertebral muscle mass and this spasm can be readily palpated. There is a list of the body away from the side involved. There is tenderness to pressure just to the right or left of the midline in the angle formed by the fifth lumbar vertebra and the wing of the ilium. Usually the sciatic nerve, where it emerges from the sciatic notch, is tender to pressure and pressure here may cause radicular pain down the leg or into the foot.

## LOSS OF TONE

There is usually atrophy or loss of tone of the gluteal muscle mass on one side. On examining range of motion in the lumbar spine, all motions will be found to be restricted, but usually extension of the spine is more painful than gentle flexion or bending to the left or right. Bending the body toward the side of pain is more uncomfortable than bending toward the opposite side. Bending obliquely backwards with the shoulders rotated 45 degrees to the painful side is usually a most painful maneuver, while bending forward and obliquely away from the painful side does not hurt as much.

The patient may demonstrate weakness of the dorsiflexor or plantar flexors of the foot while walking on his heels or walking on his toes. The knee jerk or ankle jerk may be absent or diminished. With the patient supine, weakness of the long toe extensor to the big toe or all dorsiflexors of the toes and foot may be present. There may be a loss of tone of the vastus medialis muscle along the inner aspect of the lower third of the thigh. If the lesion has been present for a few days, calf or thigh atrophy may be demonstrated by measuring the circumference of each leg at equal levels above and below the patella.

If the sciatic nerve is stretched by flexing the hip with the knee extended, the straight leg raising test, there is usually pain in the back or radiating



pain down the leg before 70 degrees of hip flexion is reached. If pain is present, it is accentuated by dorsiflexing the foot. Pain is not elicited by flexing or rotating the hip when the knee is flexed unless the hip is flexed far enough to begin bending the pelvis on the lumbar spine. This will stretch the sciatic nerve roots as well. The straight leg raising test may be performed with the patient sitting by simply extending the knee. This maneuver will often uncover an otherwise well-instructed malingerer.

### SENSORY DEFICIT

There is quite often but not necessarily some sensory deficit to light touch and pain in the distribution of the nerve roots involved. The first sacral nerve root emerges through the L-5, S-1 intervertebral foramen over the L-5 disc, and this is the disc most commonly ruptured. The L-5 nerve root emerges through the L-4, L-5 foramen and across the L-4 disc space and its rupture is next commonest in occurrence. In such an instance, if the herniation is lateral there will be an L-5 root deficit, but if it is close in to the midline, it may involve the L-5 and S-1 root as well. Higher disc ruptures are much less common and involve a different sensory distribution and different groups of muscle atrophy, but do occur and should be considered in the diagnosis. This pattern of sensory deficit is constant; it follows well-described outlines and the deficits do not change during an examination. Here again is a manner of seeking out the malingerer or faker if the sensory tests do not remain constant during the examination.

The roentgenograms in an acute herniated disc are most often normal except for some malalignment due to muscle spasm. When the rupture has been present three to four weeks or longer, the narrowing of the disc space involved may be apparent on the lateral roentgenograms. If the vertebral margins contiguous to the disc space look sclerotic, the narrowing has usually been present for several months and is most often the result of degeneration rather than acute trauma.

### TREATMENT OF DISC

The initial treatment of a ruptured disc, if there is no gross neurological deficit, should follow the same conservative line as those given for the treatment of a sprain or strain. If after ten days of such treatment, preferably in the hospital, there is no significant improvement, especially in sciatic

nerve irritability, surgical removal of the herniated disc by a neurosurgeon or an orthopaedist who has been trained to do such surgery should strongly be considered. If after 10 to 14 days of absolute bed rest and other conservative measures, the muscle spasm and the sciatic nerve irritability are decreased, the patient should be fitted with a low back brace and allowed to be up.

If the patient is more comfortable with his lumbar spine slightly flexed, then a Williams low back brace is better suited to him. If he is more comfortable with his lumbar spine in slight extension, then a low Taylor back brace is preferred. The brace should be worn at all times the patient is up for a period of three months, and if there has been no recurrence after this period of time, gradual isometric exercises should be begun and the brace gradually discarded. If at any time there is recurrence on such a conservative regime, the patient has the choice of reinstitution of the same conservative regime again, or of being directed to the services of a good disc surgeon. Recurrence is likely up to one year following the initial rupture and all strenuous activity should be eliminated during this period of time. The back exercise program should be continued on a daily and progressive basis. It is my opinion that approximately 50 per cent of all disc ruptures can be treated conservatively and that 50 per cent will require surgical extirpation.

### FUSION

Fusion of the low back is not indicated for the initial disc rupture unless gross instability can be demonstrated radiographically or at the time of operation. Fusion of the areas involved is indicated, however, in recurrent disc ruptures following surgical removal or in cases where there has been a marked loss of disc interspace and subsequent incongruity of the facet joints, or crowding of the intervertebral foramina.

Hypertrophic or osteoarthritis should be considered among the traumatic causes of low back pain. These are degenerative changes caused by ordinary stress or strain on a normal or abnormal structure. The joints become irregular and spurs of bone build up in the ligamentous and capsular tissues about the joint. The complaints are usually of morning stiffness and pain which is better after the patient has been up an hour or two and limbered up. It is relieved by heat. The symptoms are usually worse in inclement weather; sitting, standing, or lying in any one position for a long period of time is not tolerated, and the back is easily irritated by stress. There is no radicular element to

the pain and no neurological abnormalities usually.

Roentgenograms reveal the bony spurs at the front and sides of the vertebral bodies and sclerosis about the facet joints. The treatment for an acute flare-up is rest, heat and a low dosage of a steroid or Butazolidin over a short period of time. External support in the form of a corset or brace prevents a flare-up. The back should be exercised only to keep the range of motion as free as possible. Exercise in a great degree causes more bony excrescences and more irritability to the incongruous joints.

More severe trauma causes fragmentation of bone, such as compression fractures of the body or avulsion of the transverse processes. These are readily apparent on the roentgenogram.

### ABNORMALITIES

Congenital and developmental abnormalities in themselves are not painful as a general rule, but cause the low back to be more subject to strain and sprain. Over a long period of time they may lead to degenerative changes with early disc rupture and traumatic arthritis in the later years.

Probably the most common developmental deformity is a leg length discrepancy. With the ligamentous laxity that occurs in the female sacroiliac joints, a leg length difference leads to abnormal strain on the joints, with pain and tenderness localized over this area, and freedom from muscle spasm. Pain is elicited on stretching the sacroiliac joint by the Faber or Patrick tests. Equalizing leg lengths by simply lowering or raising the heel height and the use of a sacroiliac belt or snug girdle will stop the discomfort in a few days. With the leg length difference a functional scoliosis is present with a pelvic tilt causing a compressive force on the intervertebral disc and degenerative changes therein, with subsequent easy rupture. Postural back pain on the side of the convexity may also occur.

### SPINA BIFIDA

Spina bifida or spina bifida occulta is not painful, but with the absence of a spinous process, the interspinous ligaments must span two spinous processes without a bony reinforcement; it is more easily strained or sprained. Rest and heat until the symptoms subside, followed by the use of a lumbosacral corset, will help prevent repeated recurrences.

Sacralization of the fifth lumbar vertebra causes one or two abnormal joints between the transverse processes of L-5 and the ilium. These abnormal

joints are often incongruous and their ligamentous support is imperfect. The low back does not have normal mobility between the fifth lumbar vertebra and the sacrum and normal motions or loads in the normal back may readily strain or irritate these false joints. The treatment again is rest and heat until symptoms subside followed by the use of a corset support.

Lumbarization of the first sacral segment adds extra mobility and less stability to the low back, making extra ligamentous support necessary with added ease for strains and sprains to occur. The same measures are used in the treatment. Occasionally low back fusion is needed if recurrent stresses and strains are frequent enough to be disabling or if external support is not tolerated by the patient or is ineffective.

Spondylolysis and spondylolisthesis are common developmental causes of low back pain. Spondylolysis is a defect in the pars interarticularis of the posterior arch of the vertebra. This area lies at the junction of the pedicle with the lamina and spinous processes. The superior facet and the pedicle remain attached to the vertebral body. The spinous process and inferior facet are separate bones attached to the pedicle only by strong or not so strong scar-like tissue. If it is weak it allows the body of the vertebra to slip forward on the vertebra below. When the slipping has occurred, it is then called spondylolisthesis. This scar tissue may build up over the years or become irritated or swollen by a minor stress and strain and cause pressure on the nerve roots as they travel underneath it into the intervertebral foramen. This instability of the posterior arches may add stress and strain on the annulus fibrosus and intervertebral disc and cause early degeneration and rupture.

If forward slipping has occurred, it is readily visible on the lateral roentgenogram of the lumbosacral joint, but if slipping has not occurred, right and left oblique views of the lumbosacral area may be needed in order to detect such.

These false joints are often subject to easy sprain and strain and are treated as any other sprain or strain. If recurrence is often, a low Taylor back brace is indicated, and if uncontrolled by the brace, or this is not tolerated by the patient, a low back fusion is required.

With the added stress and strain on the annulus fibrosus, disc herniations are fairly frequent in this condition. Although this defect is more common in the fifth lumbar vertebra itself, the fourth lumbar disc is the one most often ruptured. If a disc rupture occurs, then a surgical removal of the ruptured disc is needed and at the same time an



L-4 to sacral fusion should be done, with or without removal of the loose posterior fragment. In view of the morbidity following a lumbosacral fusion, simple removal of the herniated disc may be done, and the patient observed to see if the symptoms of an unstable back occur and a fusion can then be done at a later date.

A large number of patients with spondylolysis or spondylolisthesis are entirely asymptomatic. These defects may be uncovered on routine pre-employment roentgenograms of the back. If they are asymptomatic, they should simply be ignored.

### INFECTIOUS LESIONS

Any bacteria or fungus may deposit itself in the lumbar disc and cause an osteomyelitis. This is usually a hematogenous spread from some other focus or secondary to surgery in this area. Since tuberculosis is on the decline, this condition is seen less commonly and usually involves the back at a higher level in the upper lumbar or dorsal areas. Pyogenic infections of the lumbar area are occurring more frequently as bacteria become more resistant to our antibiotics.

These patients usually give a history of a preceding upper respiratory infection or genitourinary infection one or two weeks before they develop rather excruciating low back pain. The pain is such that they are usually fairly comfortable as long as they are perfectly still, but the least motion imaginable, such as someone merely touching the bed, triggers extreme pain. They will usually have a low grade temperature of around 100°F orally. They will run a slight anemia and a slight leukocytosis and have a markedly elevated sedimentation rate. They may have neurological signs of nerve root impairment as in a disc rupture or even signs of epidural pressure with bladder or bowel aberrations, but most often the neurological examination is negative.

### EXAMINATION DISCOMFORT

These patients resist examination because of the discomfort caused by such, and are at times mistakenly considered psychotic for their relative comfort when absolutely still and unmolested and their apprehension of any motion. The x-rays during the first two weeks of such an illness are most often normal; this leads one further to suspicion a psychosis. Only after two weeks do the roentgenograms begin to show the characteristic narrowing of the infected disc space, the moth eaten appearance of the vertebral margins contiguous

to this disc space, and the early sclerosis of the vertebral bodies around this area of infection as reactive bone attempts to wall off the affected area.

The treatment is aspiration of the involved disc space to obtain a culture, and sensitivity, placement on the appropriate antibiotic for a four to six week course, and immobilization in a body cast or brace. These disc spaces collapse further till the vertebral bodies rest on one another. They will usually fuse spontaneously over a period of approximately 12 months.

The infectious arthritides, rheumatoid arthritis and Marie-Strumpell arthritis, often cause low back pain. Rheumatoid arthritis most often affects the facet joints and the sacroiliac joints while ankylosing spondylitis or Marie-Strumpell arthritis involves the anterior and posterior longitudinal ligaments as well as the sacroiliac joints. A young adult male with a low back pain, stiffness of the lumbar spine out of proportion to the symptoms, a decreased chest expansion, and pain on pressure over the sacroiliac joints or pain on stretching them should be considered to have Marie-Strumpell arthritis until proven otherwise.

### X-RAY DISCLOSURE

The first roentgenographic evidence of this disease, which is 13 times more common in males than in females, is irregularity of the sacroiliac joints with sclerosis of the ilium and sacrum on either side of these joints. Phenylbutazone or Butazolidin is almost specific for this condition and will relieve most of the pain within three weeks of its use. Butazolidin can be used as a therapeutic-diagnostic test for Marie-Strumpell arthritis. The dosage need not be over 100 mg. three times a day. It should be taken in the middle of meals to prevent a gastrointestinal upset and the patient should be advised to discontinue the medication if dermatitis, stomatitis, or swelling of the feet or ankles occurs.

In addition, the patient should have a hemoglobin determination and a white blood count done at 2-3 week intervals while on the medication such that it may be abruptly discontinued if a significant anemia or leukopenia occurs. Folic acid will revert the megaloblastic pancytopenia quite readily in almost every instance, but a nonreversible agranulocytosis has been attributed to this drug. As soon as the symptoms subside, the dosage should be lowered. The patient can often be maintained well on only 100 mg. of Butazolidin daily.

Another inflammatory condition which affects the low back is osteitis condensans ilii. This disease is almost wholly confined to the female and



follows a pregnancy, abortion, pelvic surgery, or menstrual abnormality. These patients most often localize the pain over both sacroiliac joints but they may have radicular discomforts down the legs. Pressure on the iliac side of the sacroiliac joints causes pain, as does stressing the sacroiliac joint. Roentgenograms show a characteristic sclerosis of the ilium on both sides next to the sacroiliac joints, while the sacrum is entirely free of any sclerosis. Here again Butazolidin is almost specific, for the symptoms are quite quickly relieved by it and the use of a snug fitting girdle. The disease itself is a self-limited one and will run its course in approximately one year. For this reason it is at times necessary to continue the Butazolidin over a long period of time at a low dosage and the prescribed precautions used while the patient is on this drug.

### METABOLIC CAUSES

The most common metabolic cause of low back discomfort is post-menopausal or senile osteoporosis. These are essentially the same and are the result of the loss of anabolic hormones, estrogen and androgen, as one's ovaries or testicles become inactive. The normal everyday loss of bone is not replaced, that is, the catabolic process outstrips the anabolic process. Most often, compression fractures from practically no trauma bring the patient to the physician. Occasionally there has been no fracture and the patient develops a gradual dorsal kyphosis and increased lumbar lordosis with increasing lumbar spine pain. They often have spent hours on end on an electric heating pad which further increases the softening of the bone and the pain, although it temporarily makes them more comfortable. Roentgenograms of the bone have a translucent appearance with thin cortical outlines and the vertebra may assume a fishtail appearance. Blood chemistry usually shows normal values for all substances, but occasionally the calcium content may be low.

This condition is treated by an external support and hormone replacement in the form of estrogen and androgen on a cyclic routine. In addition, a diet high in Vitamin C, protein and calcium is of benefit. A calcium-Vitamin D supplement may also be used. It is important that these patients not use heat for prolonged periods of time; that is, the heat should be applied to the back for no longer than an hour at a time with at least a two hour interval between heat applications. It is also important that they keep physically active, for the stress of activity will help remineralize the bone. Elderly patients with compression fractures are fitted with a heavy reinforced corset or long

Taylor back brace within one week after the fracture and are made to get up out of bed. Recumbency, although more comfortable, increases the osteoporosis from disuse and aggravates the overall picture.

Paget's Disease or osteitis deformans is probably of metabolic cause. It often causes low back and/or leg discomfort. The clinical pattern is usually characteristic. It usually occurs in men over 40 years old, with enlargement of the head, curvature in the dorsal and lumbar area in both planes, bowing of the legs, a waddling gait due to varus of the femoral necks, and an increase in the antero-posterior diameter of the chest. The bones show patchy areas of sclerosis and lysis as well, with bending of the bones. In the florid or active phase the serum alkaline phosphatase is markedly elevated and occasionally the serum calcium is elevated. The treatment is symptomatic support alone.

Another less common, but not rare, metabolic disease causing low back pain is gout. This most often causes sacroiliac pain but has been known to cause disc-like symptoms. The initial laboratory workup on admission of a patient with low back discomfort should include a blood-uric acid determination. This test is invalid if aspirin or related compounds or Butazolidin or steroids have been taken in the recent past. The back pain due to gout readily responds to Colchicine in therapeutic dosage and once the acute symptoms have subsided, the Colchicine can be discontinued and a uricosuric agent such as Benemid begun and maintained.

There are other metabolic abnormalities which cause low back pain, such as porphyria and ochronosis, but they are extremely rare. The urine of patients with porphyria turns black on standing overnight and the roentgenograms of patients with ochronosis show extensive calcification in several intervertebral discs.

### NEOPLASMS

Multiple myeloma is the most common neoplasm primary in bone causing low back pain. The patients are pale, often appear emaciated, show diffuse tenderness over the involved bone and the x-rays show lytic lesions in the vertebra and pelvis as well as punched out areas in the skull. The patients are usually anemic, have a high sedimentation rate, carry a high serum globulin which reverses the AG ratio and usually elevates the total serum protein. These patients usually carry Bence Jones protein in their urine and may have an elevated serum calcium and alkaline phosphatase. If necessary, a bone marrow study will

## LOW BACK PAIN / Sage

substantiate the diagnosis in two thirds of the cases. The patient should be treated with an external support in the form of a corset or a brace and the anemia corrected. Areas of acute tenderness or pain may be alleviated by local x-ray treatment. An alkalating agent such as Cytosin or Alkaran will make these patients much more comfortable. If the blood calcium becomes excessively elevated, and it sometimes does, this may be controlled by corticosteroid therapy. The alkalating agents are palliative and not curative, but are extremely worthwhile in the management of these patients.

Any carcinoma may metastasize to bone. The most common ones which spread to bone are those originating in the prostate gland, the thyroid gland, the breast, the kidney, and the bronchus. Of these groups, carcinoma of the prostate and

rarely the breast cause an osteoblastic response or sclerosis of the bone. The others, carcinoma of the breast included, usually cause destruction of bone or an osteolytic process. The prostate metastases will be accompanied by an elevated serum acid phosphatase while the others usually cause an elevation in the serum alkaline phosphatase. A lead as to the location of the primary site may be obtained by a punch biopsy of the involved area and microscopic evaluation of the biopsy. Therapy will depend on the site of the primary lesion.

In summary, the causes of low back pain in the human are those that might affect any other bone or joint. With a good history, physical examination and x-ray evaluation supplemented by a few blood and urine determinations, one can arrive at a reasonably accurate diagnosis and institute adequate therapy. ★★★

869 Madison

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## LEAVES YOU BREATHLESS

There's a lot in a name and how you use it, observes comedian Sammy Shore. For instance, Dr. Joseph Lister, the British surgeon and founder of antiseptic surgery, had a mouthwash named after him.

It is fortunate, Shore says, that they used "Lister" and not his given name.



# Management of Acute Myocardial Infarction Patients

WILLIAM H. ROSENBLATT, M.D.

Jackson, Mississippi

IN ACUTE MYOCARDIAL infarction patients, when the pain is severe and apprehension is marked, the drug of choice is morphine sulphate. Preferably, it is given intravenously in a dosage of one-fourth to one-half grain dissolved in 5 cc. of water, given slowly until relief of discomfort is obtained. The intravenous route of administration is especially effective when shock is present since the profound vasoconstriction in the presence of shock may prevent the early absorption of the drug when given intramuscularly. Intramuscular injections of morphine sulphate may actually predispose to later respiratory depression after cardiac shock has been effectively treated. This is particularly true after poor response to the initial intramuscular injection and persistence of pain prompts the use of more morphine sulphate in an effort to obtain relief of the pain. Under less trying conditions, Demerol may be given either I.M. or I.V. in the dosage of 75-100 mg. When posterior wall myocardial infarction is present (it may be suspected with a slow cardiac rate and distant heart sounds—AV block), atropine sulphate,  $\frac{1}{75}$  to  $\frac{1}{150}$  grain, should be given I.M. with narcotics to attempt to block excessive vagal effect.

Sedatives, in the form of phenobarbital, one-half grain T.I.D., or tranquilizers such as meprobamate or Librium should be given in the customary dosages to allay anxiety and to keep the patient dozing but alert when others are around.

The ashen, sweating patient reflects profound vasoconstriction, his physiological attempt to maintain blood pressure of the highest possible levels during a period of low cardiac output. This

may respond to proper use of narcotics as mentioned—evidence of response to relief of intense pain and apprehension.

The main objective of treatment of shock is to keep the systolic blood pressure high enough to

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*The author discusses the aspects of pain, shock, and arrhythmias in the acute myocardial infarction patient. He discusses in detail the detection and management of premature beats in the first 24-72 hour critical period. He reviews the use of anticoagulants and vasodilators.*

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maintain coronary and cerebral blood flows at effective levels.

An intravenous drip of Aramine (3 cc.-30 mg. in 500 cc. of 5 per cent glucose and water) should be tried initially. If no response is obtained, then Levophed should be used—with one ampule of Regitine to lessen the risk of slough. It might be mentioned that when attempting to wean the patient off of Levophed, 100 mgs. of Solu-Cortef should be added to the drip.

When profound vasoconstriction with cyanosis is present along with a decrease in pulse pressure and more and more Levophed is required, digitalization should be considered, that is, rapid digitalization, either intravenously or orally.

The main cause of the high mortality rate in acute myocardial infarctions is arrhythmias, i.e. ventricular tachycardia, ventricular fibrillation, supraventricular tachycardias or asystole; the high rate usually occurring in the first 24-72 hours.

It is during this first 24-72 hour critical period that the greatest potential resides regarding treat-

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ment. During this time the patient should be under close and constant observation, preferably in an intensive coronary care unit with 24 hour electronic monitoring. If this is not available, blood pressure, apical and radial pulse recordings should be made every two hours. Detection of premature beats should alert the physician and prompt treatment started.

## Premature ventricular contractions:

Quinidine sulphate, 0.3 gm. every six hours orally.

Pronestyl, 500 mg. every six hours, orally or I.M.

Dilantin sodium, 250 mg. I.V. or 100 mg. orally every six hours. This drug is especially useful when there is some question regarding digitalis intoxication.<sup>1</sup>

## Supraventricular tachycardia:

Quinidine sulphate, 0.2 gm. every two hours for five doses; digitalis—rapid, orally or I.V.

## A.V. heart block:

Steroids—I.M. Solu-Medrol, 40 mg. every 12 hours or, orally, prednisolone, 15 mg. every six hours and then taper the dose. Atropine sulphate, gr.  $\frac{1}{75}$ – $\frac{1}{150}$  every six hours I.M.

## Ventricular tachycardia:

Quinidine sulphate orally, 0.2 gm. every two hours for five doses.

Pronestyl as an I.V. drip but be cautious regarding hypotension. Pressor-amine drip should be going.

Direct current counter-shock.

## Congestive heart failure:

If dyspnea is present with pulmonary rales and/or distended neck veins, treatment is mandatory as follows:

Oxygen

Mercurial diuretics

Aminophyllin, 3¾ gr. I.V.

Digitalis, either I.V. or oral for rapid digitalization.

## Other measures:

Oxygen should be administered if there is frank cyanosis present.

Regarding anticoagulants, there is some difference of opinion as to whether or not to administer these drugs. Of the three things attempted with anticoagulants—prevention of new or extension of coronary artery thrombosis, prevention of mural thrombus formation, and prevention of peripheral venous thrombosis—only with the pre-

vention of peripheral venous thrombosis is there any degree of success. Actually, thrombo-embolism accounts for only about 7 per cent of the mortality rate in acute myocardial infarction over the 21 day period of management. The greatest percentage of deaths, as indicated previously, occurs in the first 24-72 hours and before anticoagulants can really be of benefit.

Regarding which anticoagulant drug to use, I might mention in passing, that in a large cooperative study of approximately 800 cases in which I participated in the years of 1960-1963<sup>2</sup> an attempt was made to compare heparin and warfarin in acute myocardial infarctions. It was found that the warfarin treated group of patients had a lower mortality rate over the 21 day period than did those treated with heparin.

## Vasodilators:

These agents are of doubtful value in the management of acute myocardial infarction and may actually aggravate the condition by further dropping an already low blood pressure. On the other hand, if angina has been previously present and persists while the patient is convalescing from an acute myocardial infarction, sublingual nitroglycerine may be used.

## Stool Softeners:

This, of course, is an important aspect in the management of acute myocardial infarction patients since straining at stool may precipitate sudden death by means of the Valsalva maneuver or the pitching off of bits of mural thrombus resulting in thrombo-embolic phenomena.

## Post Infarction Syndrome:

This is a febrile condition characterized by the occurrence of pleuritic pain with or without friction rub, leukocytosis with symptoms and findings suggesting extension of the myocardial infarction but without further ECG changes or increases in the SGOT levels. This condition usually occurs one to two weeks following the acute myocardial infarction. Treatment of this consists of administering steroids such as prednisolone, 60 mg. daily and then gradually tapering the dose off. Anticoagulants should be discontinued since there is a risk of hemopericardium with tamponade. ★★★

1151 North State St.

## REFERENCES

1. Conn, R. D.: Diphenylhydantoin sodium in cardiac arrhythmias. *New England J. Med.* 272:277 (Feb. 11) 1965.
2. Sodium heparin vs. sodium warfarin in acute myocardial infarction, conclusions based on study of 798 cases at 13 hospitals. *J.A.M.A.* 189:555 (Aug. 17) 1964.



# Clinicopathological Conference LXXII

Conducted by the Department of Pathology  
Singing River Hospital  
Pascagoula, Mississippi

*Dr. C. L. Ezell:* "The case for today is that of a 52-year-old white male who was admitted to Singing River Hospital approximately three years previously with extensive lung disease on right, following which a right lower lobectomy was performed. He was again admitted with lung disease in the left chest quite similar to that previously treated, and he expired 24 hours later. Clinical discussion will be presented by Dr. Don Whigham."

*Dr. Don Whigham:* "The protocol that we are given on this case is considerably lacking in clinical facts. I feel that we can best discuss this case by dissecting the available clinical material from the protocol, discussing the differential diagnoses, and then trying to arrive at the most probable diagnosis based on the clinical material."

"This was a 52-year-old white male who was initially admitted to the Singing River Hospital on April 1, 1962. The family stated that before this admission he had always been in relatively good health and that his social habits were not unusual, except that he was an extremely heavy smoker. Apparently the family history was non-contributory. The present illness had started approximately one month previously, at which time the patient was thought to have pneumonia. He responded to outpatient treatment and was returned to work. Several days before this admission, he had again started feeling pain in the lower right chest, had had a productive cough and had become very weak."

"On the day of admission, the attending physician was called to the patient's home, at which time no pulse could be felt in the left wrist. A pulse in the right wrist was weak and barely perceptible. The blood pressure was 68/60 in the right arm, and I assume that no blood pressure

could be obtained in the left arm. At this point, with apparent clinical features of shock in an older patient and with the absence of pulses in the left upper extremity, certainly our attention should be directed toward the possibility of a dissecting aneurysm beginning in the thoracic aorta."

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*CPC LXXII involved a 52-year-old white male admitted with lung disease in the left chest. Three years previously he had been admitted with extensive lung disease on the right, following which a right lower lobectomy was performed. Discussers are Drs. C. L. Ezell, Don Whigham, Sam Levi.*

---

"Further examination revealed a very thin male in poor nutritional state, appearing acutely ill and apprehensive. The patient was also lethargic, and he cooperated poorly to questioning. Auscultation of the chest revealed coarse, moist rales, particularly in the right lung field. The heart sounds were heard faintly, and the rate was very rapid. Palpation of the abdomen apparently was not remarkable, and the examination of the extremities was negative."

"In addition to the possibility of a dissecting aneurysm of the thoracic aorta, I think that we have to consider several other possibilities in the differential diagnosis. The possibility of a myocardial infarction in an acute illness with shock should be foremost in the consideration. Another possibility would be pulmonary embolization. (There were no findings in the extremity, but that does not rule this out.)"

"Another consideration in this regard, since there obviously had been symptoms for several weeks of pulmonary disorder and on admission the patient was morbid and had the clinical findings of peripheral vascular collapse, is certainly pulmonary tuberculosis and Addison's disease. The other possibility we have to consider at this point is the fact that the patient could have an overwhelming pulmonary infection with a septicemia and a septic response producing the above clinical findings.

### LABORATORY FINDINGS

"The laboratory examinations revealed a hemoglobin of 14.8 gm. and a white blood count of 6,000. The hematocrit was 43 volumes per cent and the MCHC was 34.4 per cent. The differential revealed 50 segs, 1 stab, 42 lymphs, and 7 monos. The VDRL was negative. The electrocardiogram revealed a very slight degree of right axis deviation and ST depressions along the right precordium, suggesting the possibility of some chronic lung disease, but showed no acute evidence of primary cardiac pathology. The urinalysis revealed a specific gravity of 1.015, was negative for sugar, and revealed a trace of albumin. Microscopical examination of the urine revealed only 4 to 6 WBC/HPF. Repeated sputum examinations for acid fast bacilli and malignant cells were negative. Serum amylase was 72 units.

"In view of the above laboratory findings, there is no evidence to support any chronic blood loss etiology. The WBC does not support the findings of a severe septic or toxic response, and the electrocardiogram at this time does not present any evidence of myocardial infarction, although the findings are certainly compatible with a pulmonary embolization.

### X-RAY FINDINGS

"The chest x-ray taken shortly after admission revealed an increased density in the right hilus, which was interpreted as clouding of the lower half of the right hemithorax representing lower lobe pneumonia (Figure 1). The heart was small, and the cardiac silhouette was not remarkable. A repeat chest x-ray one week later revealed the remaining lung to be clear but continued to show clouding of the right lower lung, regressing somewhat. The patient had a gallbladder series, an upper GI series, a barium enema, which revealed no disease.

"A repeat chest x-ray on April 16, 1962, revealed persistence of a density in the right lower lung field, and another on April 21, 1962, revealed no appreciable improvement of the lesion of the lower lung field. Bronchoscopy with repeat studies for acid fast bacilli and malignant cells was negative. At this time, certainly the patient's disease process seemed to have been centered around the lungs and respiratory system: how-



Figure 1

ever, the persistent lesion in the right lower lung field apparently showed improvement in clinical response but had the persistent x-ray findings of a density involving the right lower lobe.

"I feel at this time, with a nonresolving lesion which shows some degree of nodular density, that an intrabronchial lesion is of prime concern, with the patient's age and heavy smoking making the most likely consideration that of a bronchogenic carcinoma with obstruction to the right lower lobe bronchus. Other possibilities are bronchial adenoma or some foreign body in the lower lobe bronchus, although we apparently have no further indication of this based on the x-ray studies and bronchoscopy. In addition to the neoplastic lesions involving this area, one has to consider certain degenerative and inflammatory diseases. It would certainly be unlikely for pulmonary tuberculosis to produce this particular clinical picture. Sarcoid does this, but it would be a very



unlikely possibility with the absence of any other pulmonary findings or apparent involvement of the lymphatic system.

"Histoplasmosis remains a possibility; however, it usually takes a much different course in that it forms a localized area of pulmonary consolidation. Blastomycosis could easily produce these pulmonary findings; however, most frequently we associate it with some evidence of a pulmonary abscess, and certainly there is no evidence of air-fluid level present on the x-ray examinations. Coccidioidomycosis is also a possibility that we must consider in the differential diagnosis; however, we have none of the skin tests to give us any information, and we have no clinical history regarding the possible climatic factors predisposed to these conditions.

### PULMONARY CONSIDERATIONS

"Pulmonary actinomycosis certainly remains a possibility; however, a tremendous affinity for development of fistulous formations either in the form of a broncho-pleural or broncho-pleural-cutaneous fistula would certainly be more characteristic of this disorder. Other unusual diseases—such as the other granulomas, particularly Wagner's granulomatosis—could produce a nodular granulomatous finding in the lungs such as this; however, most frequently there is a considerable degree of other systemic manifestations, particularly renal and evidence certainly of a focal glomerulonephritis of which there is no clinical information in our protocol.

"Certain of the degenerative diseases, such as periarteritis nodosa, lupus erythematosus, and scleroderma, are remote possibilities that could produce these particular clinical findings; however, I do not think we have the clinical information at this time to support any of these diagnoses.

### EXPLORATORY THORACOTOMY

"We have no further information preoperatively, such as a scalene node biopsy, which might have been of some value in the preoperative evaluation. The patient was then subjected to an exploratory thoracotomy. I feel that this was justified, based on an unresolving pulmonary lesion on a patient of this type because a primary neoplasm at this age is of utmost concern. Apparently during the exploration of the disease it was found to predominantly involve the lower lobe, which was found to be completely consolidated, being firm, dark red in color. A lower lobectomy was performed.

"I assume here that the pathologist must have thought that the histological examination of the specimen was an indication of the final diagnosis and withheld this information from us. On this basis, we still have the differential diagnosis of a malignant neoplasm with atelectasis and consolidation. Other considerations at this time and with this evidence must be a completely unresolved pneumonic process and more unusual forms of pulmonary consolidation, such as lipoid pneumonia and so forth.

"The patient apparently recovered satisfactorily from his thoracotomy and lobectomy, and he was able to return to work, although he apparently never returned to his former state of health. The patient remained somewhat short of breath subsequent to his surgery, but he had not seen a physician in the two years previous to his admission on Aug. 28, 1965. On admission, the patient was again found to have respiratory distress and showed signs of cardiac decompensation. Here we are not told exactly what the findings of the decompensation were, whether it was the form of pulmonary edema or shock, peripheral edema, and so forth.

### CLINICAL SIGNS

"The pulse was fast, weak, and thready. The blood pressure was 100/60 and the temperature was normal. The pulse rate was 120, and respiratory rate was 32. An electrocardiogram revealed increased evidence of right axis deviation and increased ST depressions and S waves over the right precordium. Chest x-rays showed the heart to be of normal size, and the right lung showed compensatory emphysema. The left lung displayed stippled clouding with an increased infiltration around the hilus, extending toward the middle portion of the base and involving predominantly the left lower lobe and perhaps the lingular division of the upper lobe (Figure 2). It was the impression of the radiologist at the time that the patient had a pneumonia of the left lower lobe.

"The hemoglobin on this admission was 15 gm., the hematocrit was 45 volume per cent, and the MCHC was 33.3. The WBC was 4,000, and the differential revealed 59 segs, 36 lymphs, 3 monos, 2 eos, and 1 baso. The physical examination revealed an acutely ill, emaciated white male with an ashen color and sluggish response to questioning. There were loud respiratory and expiratory rales over both lung fields, and the heart rate was 140. Despite supportive measures, the patient expired 24 hours after admission.

"With the findings on this last admission, one has to consider the possibility of acute pulmonary edema; however, the x-ray findings do not appear to be those of pulmonary edema. Also, there is no significant change on the electrocardiogram to suggest myocardial disease, and the cardiac

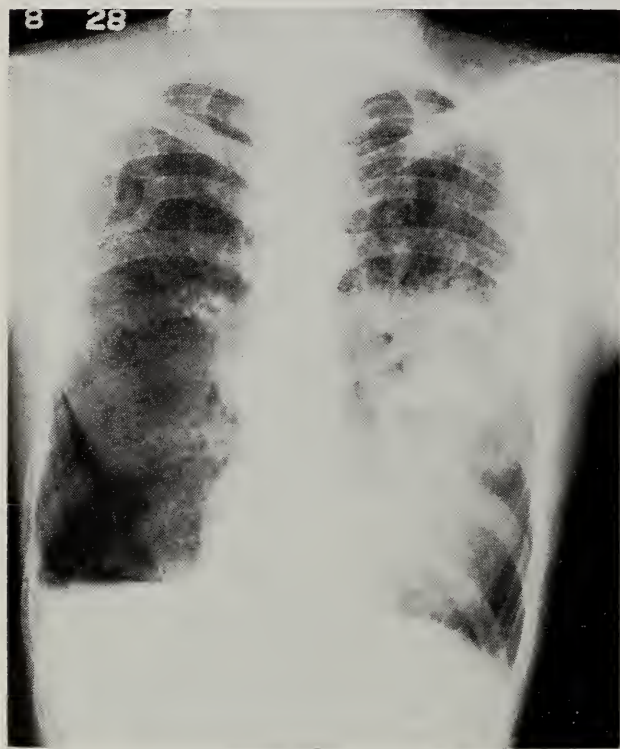


Figure 2

silhouette has not changed appreciably from the x-ray examination three years ago. I feel that the primary disease is still limited to the pulmonary tree, and pneumonia seems to be the diagnosis most likely to produce the above findings. It is certainly unlikely that the original disease was primarily neoplastic or malignant in origin from the lung with metastasis, due to the length of time that the patient had lived apparently free from any other disease.

"I certainly think that other forms of aspiration pneumonia would be a prime concern in the diagnosis, particularly since there was previously performed a right lower lobectomy with perhaps some distortion of the bronchial tree at the hilus of the lung at this time. Due to the rotation at the left, the lower lobe bronchus would be more dependent and more likely to develop aspiration pneumonia. In reconstructing both illnesses, certainly with the finding of a nodular type of pneumonic process present some three years previ-

ously, one has to consider the possibility of a lipoid pneumonia, which has a great tendency to produce a localized nodularity in the lobe in a segment of the lung.

"With the development of these findings with an advanced pneumonic process involving the left lung, I think this should be a strong consideration; however, we are given no clinical history indicating that the patient was previously predisposed to substances that would have a tendency to produce lipoid pneumonia. It is not reported that the patient was a chronic nose drops user or that he had been a chronic injector of mineral oil. The latter is likely to produce a pneumonia in a very debilitated individual and in those who have evidence of a cervical-esophageal diverticulum it frequently causes some degree of aspiration of oily substance within the tracheal bronchial tree. Based on these findings, I think the most likely diagnosis in this individual is that of an aspiration pneumonia leading to the terminal event and that the unlikely possibility of a lipoid pneumonia could produce the above findings."

#### RADIOLOGIC COMMENTARY

*Dr. C. L. Ezell:* "The attending physician on this case is not present; however, I believe the gross pathology can be described later. Dr. Levi, do you have any comments on the radiologic findings on this case?"

*Dr. Sam Levi:* "Lipoid aspiration pneumonia does not present a characteristic x-ray picture. The lesion is quite variable. When acute, it presents as a diffuse haziness or consolidation representing exudation and atelectasis. In the chronic phase, irregular streaks and small patches indicating fibrosis are noted. The distribution is basal, posterior, favoring the right side. The lesion, however, may be bilateral or unilateral. The bed-ridden patient or infant will present involvement of the superior segment of the lower lobe, manifested on the frontal view by a central density. The upper lobe may even be involved.

"The lesion may be small or involve an entire lobe. The course is slow; regression or progression depends upon whether the oily aspiration has been discontinued. It is differentiated from atypical pneumonia by the rapid change in the latter and from TBC by sputum studies, usual involvement of the upper lung, and more variable lesion. It frequently simulates a tumor and the diagnosis may only be made by thoracotomy. The suggested findings in this case are the localization to the right lower lobe initially and involvement of the left lower lobe after the right lower lobectomy."



Dr. C. L. Ezell: "As indicated by the protocol, the postmortem examination revealed the pathology to be confined to the lungs. They were both plastered to the chest wall by dense fibrous adhesions. It was difficult to distinguish the interlobar boundaries of the left lung and remaining two lobes on the right due to this process. In the regions of density demonstrated by the previous x-rays, the lung tissue was firm in consistency and varied from red to reddish gray. A thick reddish exudate oozed from the cut surfaces. The hilar lymph nodes were enlarged and firm.

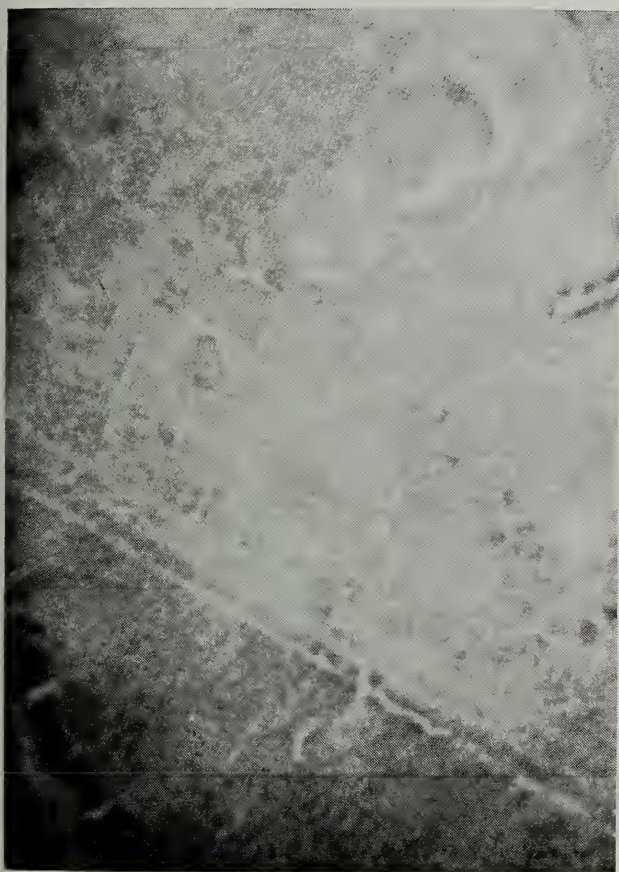


Figure 3

"Microscopically, the remaining small portions of lung tissue not consolidated showed signs of advanced emphysema. In sections through the involved portions, there were some outlying areas where the alveoli and bronchioles were packed with polymorphonuclear leucocytes, erythrocytes, and fibrin. Many of the smaller bronchi contained a similar exudate. The bronchial epithelium in general appeared fairly well preserved.

"In sections of the more involved areas, it would be difficult histologically to indicate whether this was a lobar pneumonia or bronchopneumonia. In these sections, there were changes listed under complications of either lobar or broncho-

pneumonia; i.e., the exudate was not absorbed and the process became organized or it went on to necrosis of the alveolar walls. In this case, there was little or no evidence of repair or resolution, some zones showing only early attempts at organization with alveoli containing increased fibrin, macrophages, and large mononuclear cells. The more extensive process was that of the second complication, namely frank necrosis of the alveolar walls, giving a rather solid appearance of necrotic cells and debris, degenerating leucocytes, hemorrhagic material, and fibrin (Figure 3).

"Another interesting feature was the presence of vacuolar spaces scattered throughout the sections. Some of the larger spaces seemed to be lined by a pinkish membrane on H & E stains. Frozen sections showed these spaces to be strongly positive for lipid with Sudan IV and Sudan B (Figure 4). The material, for the most part, was noted as free globules within the interstitial tissue, but foamy and vacuolated macrophages were present in many of the remaining alveoli. Gross and microscopic examination of other organs was unremarkable. It was assumed that the terminal signs of cardiac failure were based on lack of oxygen in glycogen metabolism in cardiac muscle.

#### PATIENT'S HABITS

"One pertinent bit of information not present on this patient's history and not indicated on the protocol, as Dr. Whigham has pointed out, is his habits in regard to oily decongestants. I did contact the deceased's wife, and she related that for many years prior to his first critical illness in 1962 he used "Vick's Salve" profusely, inhaling the vaporized form, rubbing it on his chest, and eating it. During the interim from 1962 to 1965, he had continued to use freely inhalants that he could purchase without a prescription.

"This man did not present clinical indications of asthma, nor did the microscopic sections of lung indicate this state. Gross and microscopic examination did, however, substantiate advanced pulmonary emphysema and fibrosis. In extensive studies of mineral oil pneumonia made by Miller, *et al.*, this was the common end result; i.e., emphysema secondary to fibrotic and inflammatory bronchopulmonary reaction which produced airway obstruction, with increasing likelihood of intercurrent infection.

"Weill, Ferrans, Gay, and Ziskind of New Orleans have recently made extensive studies on cases of lipoid pneumonia and have shown significant differences in pulmonary function tests indicating poor gas exchange before gross distortion of the lung had taken place. Also pointed



out in this work was that in lipoid pneumonia due to aspiration of mineral oil the dependent portions are more involved, while the effects of inhaled oily material tend to be more diffusely distributed.

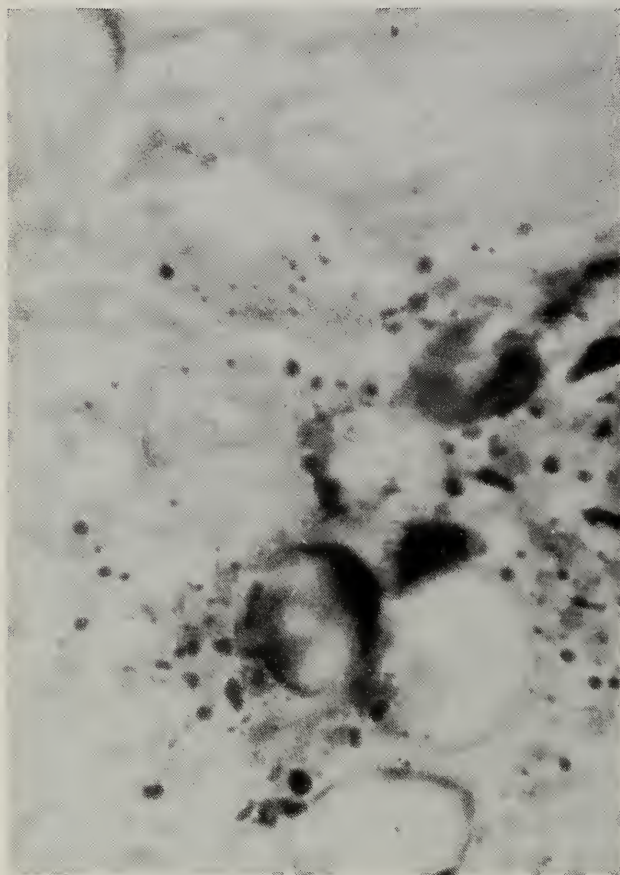


Figure 4

"Another question in this case, which I have not been able to solve, is this: How much lipid substance present is exogenous and how much is endogenous or homologous? We know that mineral oil is recognized microchemically in sections because it does not reduce osmic acid as the vegetable and animal fats do and because it readily dissolves Sudan IV. We also recognize that lipids are the most persistent product of disintegrating leucocytes.

"H & E stains indicate an extensive necrotizing and disintegrating process where the only remaining structure to identify lung tissue is a fairly well-preserved outline of a small bronchus. Certainly in a situation involving as much disintegration of cellular material as is indicated here we would expect to see considerable endogenous lipid

products. We are also accustomed to seeing Sudan positive lipid droplets in sections of lungs in infants dying of extensive pneumonia where it can be established that no lipid inhalation or ingestion has occurred.

"In relation to the effects produced by endogenous or homologous lipids, Gross, *et al.*, have conducted some most interesting experiments by intratracheal injections of lipid extracts from pneumonic and normal lung tissue of rats and guinea pigs. It was demonstrated that lipids from pneumonic lungs were more aggressive, as indicated by the severity of the inflammatory response, than lipids from normal lungs; and the severity was proportionate to the dose injected. They also made experiments with kerosene and found the lipids of pneumonic lungs 20 times more lethal than kerosene. Variable doses were given, so that the various stages from the lethal to the chronic and resolution phases could be observed.

"At no stage could multinucleated giant cells or stainable lipid be demonstrated by frozen sections in either kerosene or pneumonic lipid extract. This difference was explained on the basis that lungs can better dispose of kerosene than mineral oil and that the same lack of distinguishable features in the inflammatory cells along with the failure to demonstrate stainable lipids suggested a similar explanation for the nonspecific characteristic of the chronic pneumonitis caused by lipids from homologous cells. Certainly in our case, stainable lipid was abundant and an oily film could readily be observed on the surface of water in preparing frozen sections.

"In summary, it is postulated that this man suffered first from chronic bronchitis and emphysema, causing shortness of breath, for which he treated himself over a period of years with oily decongestants (Vick's Salve). His subsequent course was that observed most frequently in lipoid pneumonitis, with the sequence of progressing emphysema secondary to fibrotic and chronic inflammatory bronchopulmonary reaction producing further airway obstruction and complicated in the terminal event by intercurrent infection. Endogenous lipids from an existing pneumonia can only be considered as playing an adjuvant role, if any, in this case."

#### PATHOLOGICAL DIAGNOSES

1. Lipoid pneumonia.
2. Pulmonary fibrosis and emphysema.
3. Pleural adhesions.
4. Right lower lobectomy, remote.

★★★





## The tell-tale lesion on the back of her neck

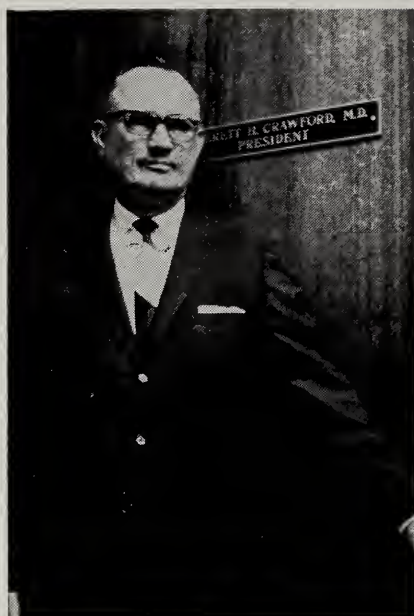


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# The President Speaking

## 'New Emphasis on Ethics'

EVERETT CRAWFORD, M.D.

Tylertown, Mississippi

THE NEW AND EXPANDED PROGRAM in medical ethics instituted last year by the American Medical Association is an affirmative move to restate medicine's commitment to the principles which have so long placed it apart from other endeavors. The new program, however, is by no means suggestive of a failure on the part of physicians. Rather, it is a recognition of the growing variety of circumstances under which medical care is being rendered by a vastly increased number of American doctors of medicine.

Most significant in this program is the forthcoming First National Congress on Medical Ethics and Professionalism which will be sponsored by AMA at Chicago early in the year. Still another impressive work is the pilot edition of the *Manual of Medical Ethics*, a giant looseleaf volume containing an unprecedented collection of publications, papers, and documents in this area of interest.

Just announced by AMA is the 1966 Norman A. Welch Essay Contest for junior and senior medical students who will compete for cash awards by writing papers on medical ethics. The competition is open to all third and fourth classmen in each of the approved medical schools.

The national level program underscores and offers new opportunities to those of component medical societies in the orientation of new members and to lecture programs previously incorporated into the curricula of our medical schools. Our own University of Mississippi School of Medicine includes this instruction to the senior students.

From all of these efforts will come benefits to the practicing physician who is generally apart from the didactic climate of theoretical morality. In his everyday confrontation with situations of choice, he knows and understands why his profession must be so committed. And for all of this, he is glad. ★★★





## A New Era of Mutuality for Medicine and Voluntary Health Agencies

### I

PHILANTHROPY FOR HEALTH purposes seems to be going out of style in the United States, say some, what with the advent of public programs and the assumption of responsibility for financing many research and service activities by various levels of government. But Americans dug into their pockets for more than \$1 billion last year for this reason alone, and that kind of money is hardly suggestive of an anachronistic practice. Of this sum, the major voluntary health agencies received an estimated \$230 million and the United Community Funds and Councils of America, nearly \$580 million.

A major portion of this amount went to carry on voluntary programs of health services, research, and education. This uniquely American phenomenon—the voluntary health agency—appears to embody three major freedoms: The freedom of the individual, the freedom of enterprise, and the freedom of association. It is clearly an appropriate and, most assuredly, a familiar part of the American scene.

The Mississippi State Medical Association has a long record of interest in voluntary health agencies, and its policy-making body, the House of Delegates, has spoken often in this connection. Within the formal structure of association orga-

nization, the Council on Medical Service has been given the authority and responsibility for working with these groups and of studying their activities, goals, and aspirations. Since 1957, the American Medical Association has published guides for relationships between voluntary health agencies and medicine, and few can doubt that these suggestions from the profession have proved beneficial. Regardless of policy or attitude, every level of medical organization has long recognized that physician guidance is one of the imperatives in the voluntary health agency picture.

### II

The state medical association has never adopted a formal definition of a voluntary health agency, but its Council on Medical Service has accurately observed the characteristics of these groups. It has stated that:

—A voluntary health agency is a voluntary nongovernmental association of citizens, with

—A common goal or interest, usually the prevention and control of some disease or infirmity, which

—Gathers voluntary contributions, gifts, memorials, and memberships, and

—Expend its resources in ways decided by its own governing body, most often for public and

## EDITORIALS / Continued

professional education, medical and basic science research, and medical care, and which

—May begin new fields of work or develop new administrative procedures to meet recognized needs.

More recently, the AMA has defined a voluntary health agency as “any nonprofit association organized on a national, state, or local level, composed of lay and professional persons, dedicated to the prevention, alleviation, and cure of a particular disease, disability, or group of diseases and disabilities. It is supported by voluntary contributions primarily from the general public and expends its resources for education, research, and service programs relevant to the disease and disabilities concerned.”

In this definition, says AMA’s Council on Voluntary Health Agencies, “the medical society has an implied responsibility for citizen groups who are interested in the promotion and maintenance of health,” going on to point out the need for physician guidance and counsel. This is the thesis of a new program by the AMA council in a series of suggested guides for medical society committees appointed to work with voluntary health agencies.

### III

The new guides add a further degree of specificity to the 1957 guides for relationships, because a positive program of liaison and organization is offered. In fact, the new guides seem to clarify the waters which have sometimes been clouded in vague, ill-defined relationships blowing hot to cold in various areas of the nation.

For one thing, the old concept of a medical association’s “approving” a voluntary health agency is apparently a relic of the past. The AMA consistently avoided entering into this activity, and many state medical associations have withdrawn from it for good and sound reasons. In 1964, the state medical association’s House of Delegates adopted this policy position:

“The Mississippi State Medical Association neither approves nor disapproves of any legitimate, established voluntary health agency. It is a policy of this association to offer guidance to such organizations and medical advice in connection with their several and respective activities.”

The policy is constructive and positive, reflecting a recognition of the three freedoms of volun-

tarism with a simultaneous acceptance of professional responsibility where and when asked to do so.

The new AMA program suggests organization of committees for liaison and advice purposes. Such committees, according to the new guides, should:

—Become familiar with the programs of the various voluntary health agencies,

—Offer services to voluntary health agencies on matters concerned with medical care, medical research, health education, and medical professional relationships,

—Provide physicians with information on the activities of voluntary health agencies,

—Afford the opportunity for a mutual exchange of information and opinion so as to permit the medical society and the voluntary health agency to understand better each other’s policies and practices,

—Encourage health agencies to select physicians for membership on their governing bodies from among medical society members in good standing or from a panel of members submitted by the medical society as suggested nominees, and

—Encourage physicians to serve the voluntary health agencies.

### IV

This evolution of attitude offers dramatic proof of medicine’s sincerity in spheres of its responsibil-



“Not yet!”





## "All Interns are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* in-

volving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to stay strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.





ity, of its respect for the well-directed efforts of citizens in the promotion of health activities, and of its willingness to furnish guidance where and when appropriate. The avenue of mutuality thereby established offers both challenge and opportunity for the blending of talent into programs fully expressive of the basic desire to render service under circumstances of personal choosing.

Where medical societies desire to implement the new AMA program and when a demonstrated need for the implementation is found to exist, there can and will be realized a new and useful era of relations between medicine and voluntary health agencies and new direction toward service in a peculiarly American manner.—R.B.K.

## Racing Fatalities

The roar of the souped-up motor, the dizzy flash of the hydroplane's spray, and the clatter of the thoroughbred's hoofs have all caught the fancy of the American racing fan—and the eye of the physician as well. Among all sports, seldom can injury and death come as quickly as in racing, be it on the speedway, track, or water.

The hazards to which racing sports participants are exposed vary widely, say the biostatisticians of the Metropolitan Life Insurance Company in a recent study, and it is not really possible to measure relative dangers because the data are lacking. But a review of five years of fatalities in surface racing offers a yardstick not previously available and suggests something of the hazards involved.

Automobile racing tops the list and is probably the most hazardous of racing sports. It is reliably estimated that about 25,000 drivers participate in various classes of racing in the United States each year. The data show that 151 were killed in the five year period under study. A third, 56 to be exact, were killed in stock cars, production model automobiles powered up and honed to a fine edge of perfection for high performance. Next come the big championship cars, the Indianapolis type, for example, which claimed the lives of 33. More than likely, this figure is worse than it appears, because very few drivers are qualified to race these complex machines.

A fifth of the deaths came in sports car races with an equal number distributed among the mid-gt and dragster classes. About a dozen fatalities were turned up in kart, salt flat speedsters, and the miscellaneous classes of four wheel vehicles.

At least 25 lives were lost in motorcycle racing during 1960-64, according to the American Motorcycle Association which sanctions over 300 events annually. Power boat racing shows up better with about only one death per year among 6,000 members of the American Power Boat Association, a group which emphasizes water racing and transportation safety.

Eight lives were lost in the sport of kings with about 1,200 jockeys riding annually in organized horse racing. The wearing of safety helmets, now compulsory in most states, has been credited with lowering the fatality rate on the turf.

What is impressive are the effective measures being instituted, often with advice and counsel of physicians, in making racing safer. And as for the great American motoring public from among whom some fancy themselves as racing drivers—let's just not talk about it.—R.B.K.

## Welcome, Prairie!

The 17th component medical society of the Mississippi State Medical Association was chartered and brought into the family of medicine's formal organization in the state on January 1. In ceremonies on December 15 at Starkville, President Everett Crawford, joined by other leaders of the association, presented a charter to the Prairie Medical Society.

The new group is made up of physicians in Clay, Lowndes, Noxubee, and Oktibbeha counties. Its organization was approved by the House of Delegates at the 97th Annual Session in 1965.

The new society represents no numeric increase in state association membership, since its 50 members merely transferred to the new unit. It does, however, represent a new medical community in the sense of society identification. Prairie Medical Society is ably led and is serious in its purposes. It has the good wishes, the support, and the active interest of all of Mississippi medicine.

Welcome, Prairie!—R.B.K.





## PERSONALS

## State Morbidity Reported Through December 3

S. LAMAR BAILEY of Kosciusko has announced the association of WILLIAM M. WOOD in general and surgical practice.

RICHARD G. BURMAN of Gulfport was named chairman-elect of the Section on Obstetrics and Gynecology of the Southern Medical Association at the recent Houston annual meeting. For two years he has served as secretary of the section.

RICHARD J. FIELD, SR., SAMUEL E. FIELD, SR., RICHARD J. FIELD, JR., SAMUEL E. FIELD, JR., JOHN Y. GIBSON, JAMES POOLE, and ROBERT D. MCBROOM have formally opened the new clinical facilities of the Field Clinic at Centreville.

HARVEY F. GARRISON, JR., BYRON ALEXANDER, HOWARD H. NICHOLS, and JOSEPH B. MILLER, JR., have occupied new offices for the practice of pediatrics at 876-A Lakeland Drive in Jackson.

MARTIN E. HINMAN of Vicksburg has been re-elected president of the Vicksburg and Warren County Historical Society.

SAMUEL B. JOHNSON of Jackson recently addressed the Woodville Lions Club on sight conservation.

M. EARL MCCRAE of Laurel has announced the opening of his offices in the North Laurel Shopping Center.

RICHARD E. SCHUSTER of Brandon was elected president of the Rankin County Heart Association at its 1965 annual meeting. Among other officers named is Mrs. Schuster who will serve as secretary.

E. A. TRUDEAU and ELDON L. BOLTON of Biloxi have announced an expansion and modernization of their clinical facilities. Associated with them in practice is ROBERT H. MIDDLETON, JR.

GERALD M. WALDEN of Ripley has been elected chief of staff of the Tippah County Hospital. To serve with him will be T. LOWELL KETCHUM as vice chief of staff.

The Mississippi State Board of Health reports the following occurrence of morbidity for 1965 through the 49th week of the year, ending Dec. 3, 1965. Case totals reported are shown opposite the disease condition.

Tuberculosis, pul. ....	1,152
Tuberculosis, O.F. ....	36
Typhoid fever ....	7
Encephalitis, infectious ....	16
Toxoplasmosis ....	1
Septicemia, Staph. ....	15
Dysentery	
Bacillary ....	60
Amoebic ....	2
Dysentery, NOS ....	9
Leptospirosis ....	1
Meningococcal infections ....	31
Diphtheria ....	1
Mononucleosis, infectious ....	53
Hepatitis, infectious ....	265
Hepatitis, serum ....	1
Tetanus ....	3
Helminthic infections	
Hookworm ....	1,022
Ascariasis ....	375
Strongyloides ....	56
Meningitis, O.F. ....	38
Histoplasmosis ....	17
Other Cestode Infestations ....	6
Salmonella Inf. ....	37
Gastro-enteritis ....	2
Streptococcus infections	
Scarlet fever ....	52
Strep throat ....	2,332
Pertussis ....	37
Measles ....	1,474
Chickenpox ....	262
Mumps ....	365
Vaccinia, smallpox ....	1
Influenza ....	5,899
Gonorrhea ....	4,209
Syphilis	
Early ....	699
Late ....	140
Rabies in animals	
Bats ....	41

***too young  
to be so tired...***







## NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

HAERER, ARMIN FRIEDRICH, Jackson. Born Stuttgart, Germany, March 28, 1934; M.D., University of Michigan Medical School, Ann Arbor, 1959; interned University Hospital, Ann Arbor, Mich., one year; residency, University Hospital, Ann Arbor, Mich., three years; member, American Academy of Neurology; captain, U. S. Army, two years; elected Nov. 2, 1965, by Central Medical Society.

HAMILTON, GEORGE CARLISLE, JR., Jackson. Born McComb, Miss., Feb. 10, 1932; M.D., University of Mississippi School of Medicine, Jackson, 1961; interned University of Mississippi School of Medicine, Jackson, one year; residency, University of Mississippi School of Medicine, Jackson, three years; member, American Psychiatric Association; elected Nov. 2, 1965, by Central Medical Society.

HOLLIS, ALLEN UPRIGHT, Jackson. Born Sulligent, Ala., March 18, 1929; M.D., Medical College of Alabama, Birmingham, 1959; interned University of Mississippi School of Medicine, Jackson, one year; surgical residency, University of Mississippi School of Medicine, Jackson, four years; elected Nov. 2, 1965, by Central Medical Society.

MCEACHIN, JOHN DUBARD, Meridian. Born Granada, Miss., Dec. 27, 1936; M.D., University of Tennessee College of Medicine, Memphis, 1960; interned John Gaston Hospital, Memphis, Tenn., one year; pediatric residency, City of Memphis Hospitals, Tenn.; elected Oct. 5, 1965, by East Mississippi Medical Society.

MERBITZ, LLOYD ALOIS, Greenville. Born Chicago, Ill., May 6, 1923; M.D., Northwestern University Medical School, Chicago, Ill., 1949; interned Michael Reese Hospital and Medical

Center, Chicago, Ill., one year; residencies, Scottish Rite Children's Hospital, Dallas, Tex., V. A. Hospital, Dallas, Tex., and the V. A. Hospital, McKinney, Tex.; elected Oct. 13, 1965, by Delta Medical Society.

TIMMIS, HILARY HOUGHTON, Jackson. Born Detroit, Mich., Aug. 20, 1931; M.D., Wayne State University College of Medicine, Detroit, Mich., 1956; interned Hospital of the University of Pennsylvania, Philadelphia, one year; assistant surgery resident, Hospital of the University of Pennsylvania, Philadelphia, four years, and chief surgery resident, Hospital of the University of Pennsylvania, Philadelphia, one year; research fellow, Department of Surgery, Wayne State University College of Medicine, Detroit, Mich., one year; certified by the American Board of Surgery; elected Nov. 2, 1965, by Central Medical Society.



## DEATHS

PARKES, LUTHER TILDEN, Louisville. M.D., Memphis Hospital Medical College, Tenn., 1901; died Nov. 26, 1965, aged 89.



RINGOLD, OSCAR EUGENE, Cleveland. M.D., Baylor University College of Medicine, Houston, Tex., 1933; interned King's Daughters Hospital, Temple, Tex., one year; member, Southern Medical Association and the American Academy of General Practice; died Nov. 19, 1965, aged 60.



ULLMAN, JACOB SONTHEIMER, Natchez. M.D., Jefferson Medical College of Philadelphia, Penn., 1903; internship, Natchez Charity Hospital, Miss.; residency, Jewish Hospital, Philadelphia, Penn.; member, American Radium Society; Fellow, Southeastern Surgical Congress; a past president of the MSMA and the Homochitto Valley Medical Society; emeritus member of MSMA and member of the Fifty Year Club; died Nov. 17, 1965, aged 83.

ZUBER, WALTER ALEXANDER, Tupelo. M.D., Meharry Medical College, Nashville, Tenn., 1922; died May 2, 1965, aged 68.

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### Book Reviews

**Hallux Valgus, Allied Deformities of the Forefoot and Metatarsalgia.** By H. Kelikian, M.D. 503 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. \$19.50.

The mechanics of the forefoot and the problems which come about through a derangement of the normal mechanics have long been topics of discussion in medical and surgical literature. As early as 1731, fairly extensive monographs on hallux valgus and allied forefoot deformities have been found. However, until recently, the deformities of the toes including hallux valgus were classified as comparatively insignificant surgical problems. This book is a lengthy monograph and deals in more detail with the subject than any other single work in English.

This book gives excellent coverage of the numerous foot problems seen in physicians' offices today. It serves as a detailed reference book to the physician performing surgical procedures on the foot, as well as the physician who wishes to treat the allied foot deformities by conservative means. Dr. Kelikian leans more toward the surgical procedures and approximately one-third of the book is concerned with surgical steps in the care of these foot problems.

The first four chapters of the book are excellent for all physicians who see these problems as the author spends considerable time on clarification of terminology and presentation of numerous photographs showing clinical examples of various foot problems. The diagrams and clinical photography presented on almost each page of this book are unsurpassed and show clearly in detail the surgical, as well as the conservative, approach to these problems.

This book could be considered an excellent text for the surgeon and a thorough reference for the practitioner.

WILLIAM B. THOMPSON, M.D.

**Synopsis of Clinical Tropical Medicine: Pathogenesis Clinical Picture, Diagnosis, Prognosis, and Therapy.** By Oscar Felsenfeld, M.D., M.Sc., Lt. Col., Medical Corps, U.S.A., Associate, Department of Experimental Pathology, Walter Reed Army Institute of Research. 378 pages with illustrations. St. Louis: C. V. Mosby Company, 1965, \$9.85.

It is no easy task to write a book on tropical medicine, partly because there is no general agreement on what constitutes a "tropical disease." When one considers that in the tropics one finds almost all the diseases known to sub-tropical and temperate zones plus others that are restricted to or more prevalent in tropical areas one begins to appreciate the magnitude of the problem. Books on the subject generally deal with diseases in this latter category, i.e., those of special interest in tropical countries.

Any attempt "to summarize the present status of clinical tropical medicine and to correlate it with those findings in the basic sciences which are applicable to everyday practice" is an engaging task. The range of etiologic agents and factors that must be dealt with is enormous, including viruses, rickettsiae, bacteria, animal parasites, mycoses, nutritional deficiencies and disorders, poisonous plants and animals, and numerous un-classifiable anemias, ulcers, and the like. This new book does an admirable job of presenting, in less than 400 pages, the essential points of interest in the diseases which are considered. The discussion is presented in the following categories: etiology and epidemiology, pathology, clinical course, sequelae and prognosis, laboratory findings and immunology, differential diagnosis, treatment and prevention. In many cases, however, there is wide departure from this outline. In some of the more important diseases it is greatly expanded, while in others of less importance it is discarded in favor of only a few sentences.

There is no annotated bibliography, but at the end of most major sections there is a list of recommended readings. Some of these lists are

fairly complete, but others could well be expanded. Chapter 2, for example, on the rickettsioses, contains only two references. Chapters 10 and 11 have only one reference each, and Chapters 6, 7, 8, 9 and 12 list none.

The foreword, by Brig. Gen. C. L. Milburn, Jr., states that "the four principal tropical diseases in order of importance are tuberculosis, diarrhea, respiratory infection, and viral hepatitis." This assertion is unsupported by any data, and is not in keeping with statements often made concerning the importance of schistosomiasis, malaria, and the various intestinal worms. It may also be noted that none of these four diseases appears in the Table of Contents nor is any one of them dealt with *per se* in the book, though there is a section on bacillary dysentery. "Diarrhea" is not a disease entity and neither is "respiratory infection." The vast majority of cases of tuberculosis involve the lungs and could be included in this latter category.

The book's illustrations are perhaps its weakest feature. None of them is original to this work, and 38 of the total of 40 have been taken from Gradwohl, *et al.*, *Clinical Tropical Medicine*, which was published fourteen years ago. The other two, Figures 29 and 30, are undated. The author states that the illustrations "were selected to show, wherever possible, initial lesions." In point of fact, all but a very few, notably Figures 4 and 5 of lepers, are of patients with far advanced disease. Of all the virus diseases described, including rabies, smallpox, and yellow fever, the only one of which there is an illustration is lymphogranuloma inguinale. Among the parasitic diseases there are no illustrations of amebiasis, malaria, or schistosomiasis. Chapters 7 through 12 have no illustrations at all. It is to be hoped that in future editions more attention will be given to the illustrative material. In a book as brief and compact as this one, it is manifestly impossible to include pictures of all the diseases described. An effort should be made, however, to achieve a better balance of what is presented.

In spite of the deficiencies noted, the author has done a remarkable job of presenting a difficult subject in clear and concise terms. This book is not intended to be a comprehensive review of the literature. It is, rather, an outline of the information which is of greatest utility to the practicing physician.

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**Indications:** 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

**Contraindications:** Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

**Precautions:** *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side effects:** Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

*Benactyzine hydrochloride*—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

*Meprobamate*—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

**Dosage:** Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

**Supplied:** Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg.

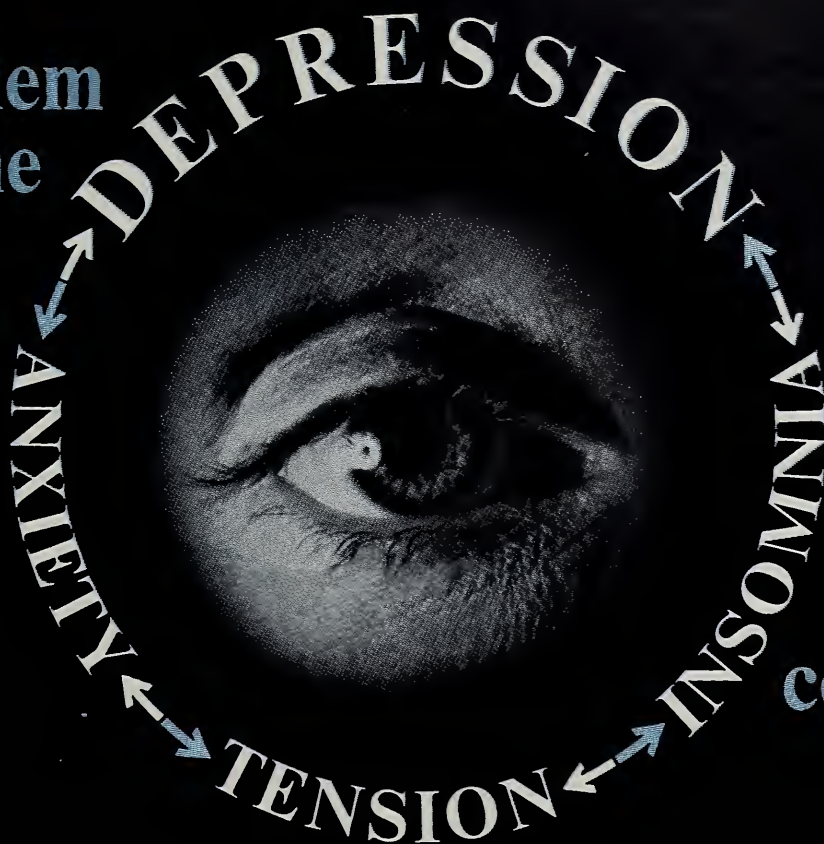
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usually restores  
normal sleep quickly  
by helping  
to lift depression...  
calm associated anxiety,  
tension, and rumination



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The book reflects the vast experience gained on this subject by the author in his many years of dealing with tropical diseases first hand. It is easy to read and should be received with enthusiasm as a quick reference work on clinical features, diagnosis and treatment by those engaged in the practice of medicine in tropical countries.

T. J. BROOKS, JR., M.D.

## PMA Names Stetler To Succeed Smith

The Board of Directors of the Pharmaceutical Manufacturers Association (PMA) has elected C. Joseph Stetler of Washington, as president of the association, which represents 140 companies who produce more than 90 per cent of the nation's prescription drugs. The action was effective at once.

At the same time, the Board accepted the resignation of PMA President Austin Smith, M.D., and the Board of Directors of Parke, Davis & Company in Detroit announced it had elected him to its vice chairmanship and to the membership of its Executive Committee, effective January 1.

Stetler has been Executive Vice President and General Counsel of the PMA since 1963. Dr. Smith was PMA's first full-time president, elected to that position in 1959 following his service as editor and managing publisher of the *Journal of the American Medical Association*.

An Ohio native, Stetler, 48, received his law degree from Catholic University in Washington, D. C. in 1938. He is a member of the bar in Washington and Illinois.

From 1935 to 1951 Stetler served in the U. S. Civil Service Commission, the Social Security Administration, the Veterans Administration and the War Claims Commission. Thereafter, he was General Counsel of the American Medical Association and Director of its Legal and Socio-Economic Division.

George R. Cain, Chairman of the PMA Board and Chairman and President of Abbott Laboratories, said, "I know I speak for the entire membership in saluting the service performed by Austin Smith in their behalf and in the public interest during the past half-dozen critical years in the development of the U. S. pharmaceutical industry.

The years ahead are equally important, and we are fortunate in having the outstanding capabilities of Joe Stetler at hand to assume the leadership of our association."

## New Standards for Nursing Home Accreditation Approved

The Joint Commission on Accreditation of Hospitals has approved a set of standards for accreditation of nursing homes and extended care facilities.

The new program will have the effect of bringing together the approval program of the American Hospital Association and the accreditation program of the National Council for the Accreditation of Nursing Homes.

According to John D. Porterfield, M.D., director of the Joint Commission, the standards will be published shortly and will be available for national distribution. The program will be activated shortly after Jan. 1, Dr. Porterfield added.

Since 1953 the Joint Commission has conducted an accreditation program for hospitals. Membership includes the American College of Physicians, American College of Surgeons, American Hospital Association, and the American Medical Association.

In addition to the new accrediting program, the Joint Commission provided for nursing home representation on its Board of Commissioners by expanding the Board from its present 20 members to 22.

One member will be appointed from the American Nursing Home Association and one from the American Association of Homes for the Aging. The two Associations will not become member organizations of the Joint Commission. Appointments to the two new vacancies will be announced by Jan. 1.

Dr. Porterfield also announced the appointment of Bruce R. Sanderson as assistant director of the Joint Commission. Sanderson was director of the Extended Care Facilities Division of the American Hospital Association. In his new position he will have responsibilities in both the hospital and extended care facility accreditation programs.





# Ole Miss Dean Is Named to Head New Heart Disease, Cancer, Stroke Program

The dean of the University of Mississippi School of Medicine and University vice chancellor at the Medical Center in Jackson has been named to head the new, far-reaching heart disease, cancer, and stroke program enacted during the 1st session of the 89th Congress.

The appointment of Dr. Robert Q. Marston was jointly announced by U. S. Surgeon General William H. Stewart and Dr. J. D. Williams, chancellor of Ole Miss. Dr. Marston will become chief administrative officer of the program which will be centered in the National Institutes of Health at Bethesda, Md. When the program begins early this year, the new director shall have completed five years service as dean of the Mississippi school.

The new federal program has an initial appropriation of \$25 million for helping local groups develop regional plans. The law provides authorization for a total of \$340 million over three years. Basis for the enactment was the report of the President's Commission on Heart Disease, Cancer, and Stroke headed by Dr. Michael DeBakey of Houston.

Dr. Marston, 42, is a Virginian by birth, and was graduated from Virginia Military Institute and the Medical College of Virginia and had additional education in Oxford, England, John Hopkins and Vanderbilt. A Rhodes Scholar and Markle Fellow, he has held faculty positions at the University of Minnesota and Medical College of Virginia where he was an assistant dean and associate professor of medicine prior to coming to the University Medical Center as director and dean in 1961. He was promoted in rank to vice

chancellor of the University of Mississippi last July.

Dr. Marston is a member of the Executive Council of the Association of American Medical Colleges, is chairman of the International Fellowships Review Panel of the National Institute of Health, a consultant to the medical and hospital facilities review committee of the Department of Health, Education, and Welfare, and on the editorial board of the *Journal of Medical Education*.

He chairs the Mississippi Medical Education Board, and serves on the boards of the Mississippi Heart Association and Mississippi Division American Cancer Society. He and Mrs. Marston are the parents of three children.

His tenure as head of the University Medical Center in Jackson has seen that institution continue its growth by a 32 per cent increase in faculty, student enrollment up from 537 to 631, and research and training grants to UMC personnel doubled from \$1,500,000 to \$3,000,000 yearly. Additions to the Medical Center physical plant since 1961 include a nine-story research wing, nurse education building, diagnostic services unit, and an apartment and dormitory for students. Funded and almost ready for bids is a \$3,000,000 expansion of the University Hospital which will add a 100-bed children's wing and 54 adult, private rooms by 1968.

Chancellor Williams also stated that "Dr. Marston has exercised sound administrative leadership so there is a solid base of administration that will be able to continue the policies of the University Medical Center until a successor has been appointed."

## Dr. Hollis Is Named to Fifty Year Club

Dr. Daniel L. Hollis of Biloxi was formally presented with the Fifty Year Club certificate and honored for his long service to medicine at the recent annual meeting of the Coast Counties Medical Society. The presentation was made by Dr. Frank G. Gruich, 1964-65 president.



*Receiving the state medical association's Fifty Year Club award is Dr. Daniel L. Hollis, center. Making the presentation is Dr. Frank G. Gruich, left, as Dr. Emile M. Baumhauer, observes.*

Representing the state medical association's Board of Trustees who sponsor the honor group was Dr. C. D. Taylor, Jr., of Pass Christian, who presented Dr. Hollis with the gold Fifty Year Club lapel pin.

A native of Alabama, Dr. Hollis was graduated from the University of Alabama School of Medicine in 1915 and received his postgraduate training in Birmingham. He served as an Army medical officer in World War I. In medical organization, he has served as president of his local medical society, as vice president of the state association, and is an incumbent member of the Council on Budget and Finance.

## AHA Asserts Strong Role in Education

The role of hospitals as educational institutions has been reasserted in a position statement on the subject approved by the Board of Trustees and the General Council of the American Hospital Association.

"Hospitals are an essential element in the education of medical and paramedical students," the AHA statement says, "and the quality and discipline of patient care has benefitted greatly from the stimulus of the educational regimen in hospitals."

Edwin L. Crosby, M.D., executive vice president of the AHA, said the position statement is considered an area of responsibility of the American Hospital Association and is the result of deliberations on the subject of hospitals as educational institutions.

"Service oriented forces (in the hospital) cannot presume to wield complete control over the educational process to the extent of dictating exact content, relative course values, or pedagogical methods. These must be the responsibility of those doing the educating, and must surely include evaluation of the educational worth of practical experience acquired in the hospital environment. This latter is of particular importance because the professions involved must be practiced to be learned. . . ."

The AHA encouraged hospitals to expand their role as educational institutions "in order to take their rightful places in the ranks of establishments of learning to which the youth of the nation may confidently turn for their life's work."

## Dr. Parsons Enters High ACS Office

Dr. Willard H. Parsons of Vicksburg was installed as first vice president of the American College of Surgeons during the recent annual session at Atlantic City.

Long active in the college, Dr. Parsons has served as chairman of the Board of Governors and subsequently as a member of the Board of Regents. He is a past president of the American Cancer Society, Mississippi Division, and is active in a number of specialty societies.



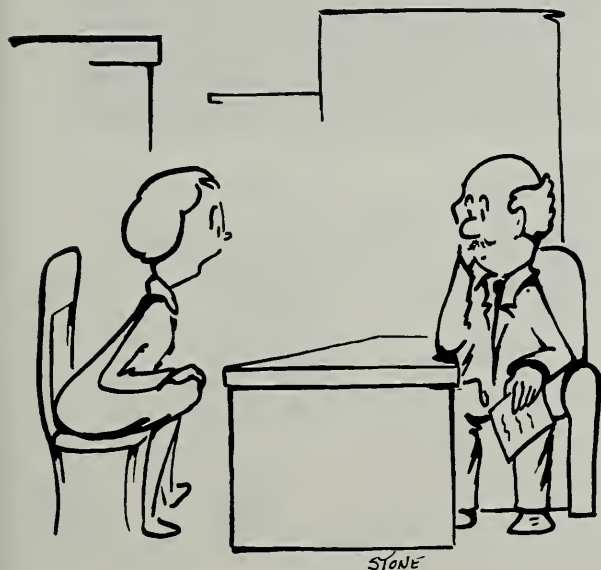
# MAGP, UMC, Lederle To Sponsor Meet

The Mississippi Chapter, American Academy of General Practice, the University Medical Center and Lederle Laboratories will sponsor a one-day symposium for physicians. Common gastrointestinal problems will be reviewed on Feb. 24, 1966, with all sessions to be held at the Heidelberg Hotel in Jackson.

Speakers are Dr. Loyd M. Nyhus, professor of surgery at the University of Washington in Seattle; Dr. C. Wilmer Wirts, Jr., of Philadelphia, Pa., professor of clinical medicine and chief of G.I. Clinic at Jefferson Medical College, and Dr. Frank Glenn of New York City, professor of surgery and chairman of the department at Cornell Medical College.

Dr. Nyhus will talk about massive upper GI hemorrhage and the current status of surgical management of peptic ulcer. Dr. Wirts will present papers on management of complicated peptic ulcer and surgical evaluation of patients with non-malignant disease. Dr. Glenn will discuss pancreatitis and differential diagnosis of jaundice and the value of various liver function tests.

Drs. William O. Barnett and Max Pharr, of Jackson, are program coordinators. Lederle Laboratories will host a luncheon during the noon hour. No fee is required for attendance at scientific sessions or for the luncheon.



"Diagnose something obnoxious. I want my husband to leave me."

# Continental Insurance Program Service Assured

Officials of the Continental Casualty Co. of Chicago, carriers for the Mississippi State Medical Association's accident and health, major hospital, and related group insurance programs have assured association officials that there will be no interruption of service following the death of the state program administrator.

Arch M. Parker of Chicago, assistant vice president for the Group Division, said that the company will assist and cooperate in every way to assure continuation of the service to association members.

The death of Thomas E. Yates, Jr., of Jackson, head of Thomas Yates Co., occasioned the assurances. The association has had group insurance contracts with the Yates organization since 1952.

During a reorganization period following Yates' death in November, the Continental field staff is lending special consultative assistance to the agency.

The state medical association's Board of Trustees heard a special report in this connection at its December 9 meeting when members also voiced an expression of sorrow for the loss of the long-time business associate.

# Blue Shield Benefits Rise in 1965

Year-end statistics released by the National Association of Blue Shield Plans included comprehensive figures on benefit payments for the first half of 1965. Second half figures are expected later in the year.

A record \$685 million in benefits was paid to Blue Shield subscribers during the past January-July period by 85 Blue Shield plans in the United States, Canada, Puerto Rico, and Jamaica. The payout in benefits amounts to 92.6 per cent of the Blue Shield income for the period, the report said.

The total of benefit payments for the period under study represents an increase of \$65 million over the comparable period in 1964. At the same time, the total number of subscribers increased as did dues (premium) income.

## Diabetes Association Sponsors Lay Education

A physician has been named to head the newly organized Committee on Lay Societies of the Diabetes Association of Mississippi. Dr. W. Johnson Witt of Jackson is leading the new activity, according to an announcement by Dr. Karleen C. Neill, president of the statewide group.

By organizing and promoting lay societies throughout the state, the physician-led association hopes to perform a significant service to the estimated 22,000 diabetics in Mississippi.

"The lay societies, composed of diabetics, relatives, and friends, can be most helpful in bringing together the combined experiences of many patients as well as the presentation of lectures, films, and other materials to broaden the knowledge of the patient," Dr. Neill said.

The association seeks the formation of the lay societies in every area of the state, recognizing that "a most important part of the treatment of diabetes mellitus is the education of the patient in his own care."

In addition to Dr. Neill, the president, and Dr. Witt, who chairs the new committee, Dr. G. Spencer Barnes of Columbus is vice president, and Dr. Alton B. Cobb of Jackson is secretary-treasurer.

## UMC Circuit Courses Are Set for 1966

The eighth annual Circuit Course series will begin in south Mississippi Jan. 4 in Hattiesburg and Jan. 5 in Biloxi. Two more courses will follow at weekly intervals at Methodist Hospital in Hattiesburg and Howard Memorial Hospital in Biloxi. Lecturers will go out from the Medical Center departments of surgery, obstetrics-gynecology and medicine. Local chairmen coordinating arrangements are Dr. A. T. Tatum of Petal and Dr. Eldon Bolton of Biloxi.

Courses to be conducted at Meridian, Laurel, Natchez, and Columbus in the spring.

## New Orleans Assembly To Meet in March

The 29th Annual Meeting of the New Orleans Graduate Medical Assembly has been announced for March 7-10, 1966, with headquarters in the Roosevelt Hotel.

Participating in the scientific program will be 19 guests essayists scheduled to present 54 discussions and papers. Also on the agenda are clinicopathologic conferences, symposia, medical motion pictures, and round table luncheons. The assembly annually features a large technical exhibit.

A postmeeting world tour is being organized for physicians and their families. Leaving March 12, the group will follow an air itinerary to Hawaii, Tokyo, Nikko, Kyoto, Mara, Hong Kong, New Delhi, Agra, Jaipur, and Cairo. The return is scheduled for April 12.

Headquarters and information center for the assembly is 1430 Tulane Ave., New Orleans, La. 70112.



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## MEETINGS

### NATIONAL AND REGIONAL

American Medical Association, Annual Convention, June 26-30, 1966, Chicago. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago, Ill. 60610.

Mid-South Postgraduate Medical Assembly, Feb. 9-11, 1966, Memphis. Mr. Leslie H. Adams, Executive Secretary, 774 Adams Ave., Memphis, Tenn. 38210.

New Orleans Graduate Medical Assembly, March 7-10, 1966, New Orleans. Secretary, Room 1528, 1430 Tulane Ave., New Orleans, La. 70112.

### STATE AND LOCAL

Mississippi State Medical Association, May 9-12, 1966, Jackson. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson.

Mississippi Academy of General Practice, Annual Meeting, Oct. 19-20, 1966, Jackson. Miss Louise Lacey, Executive Secretary, P. O. Box 1435, Jackson 39205.

Amite-Wilkinson Counties Medical Society, Third Monday March, June, September, December. S. E. Field, Centreville, Secretary.

Central Medical Society, First Tuesday, January, March, May, September, November, December, 6:30 p.m., Robert E. Lee Hotel, Jackson. James R. Cavett, Jr., B-6, Medical Arts Building, Jackson, Secretary.

Claiborne County Medical Society, First Monday January and July, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Port Gibson, Secretary.

Clarksdale and Six Counties Medical Society, Third Wednesday March and First Wednesday November, 2:00 p.m., Clarksdale. Robert L. Forman, Coahoma County Hospital, Clarksdale, Secretary.

Coast Counties Medical Society, Second Wednesday January and July, First Wednesday March, May, September, November. Charles D. Taylor, Jr., 113 Davis Ave., Pass Christian, Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando. L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Quarterly, 7:30 p.m., Natchez Country Club, Natchez. W. T. Colbert, Natchez General Hospital, Natchez, Secretary.

North Central District Medical Society, Third Wednesday March, June, September, and December. William E. Riecken, Jr., P. O. Box 831, Kosciusko, Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December, Tupelo. S. Jay McDuffie, Nettleton, Secretary.

North Mississippi Medical Society, First Thursday, April and October, Oxford. John P. McLaurin, Jr., 613 South Lamar Blvd., Oxford, Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. Joseph C. Griffing, Lucius Olen Crosby Memorial Hospital, Picayune, Secretary.

Prairie Medical Society, Fourth Wednesday, March, June, September, and December. J. M. Griffith, 824 Second Ave. North, Columbus, Secretary.

South Central Mississippi Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. James C. Bass, Jr., 424-13th Ave., Laurel, Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg. Patrick G. McLain, 1301 Washington St., Vicksburg, Secretary.



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*References:* 1. Roberts, C.E., Jr.; Perry, D.M.; Kuharic, H.A., and Kirby, W.M.M.: Arch. Int. Med. 107:204 (Feb.) 1961. 2. Dowling, H.F.; Lepper, M.H., and Jackson, G.G.: Clin. Pharmacol. & Therap. 3:564 (Sept.-Oct.) 1962. 3. Editorial: Antibiotics & Chemother. 11:427 (July) 1961. 4. Baer, R.L., and Harber, L.C.: JAMA 192:989 (June 14) 1965.

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Volume VII

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# JOURNAL of the Mississippi STATE MEDICAL ASSOCIATION

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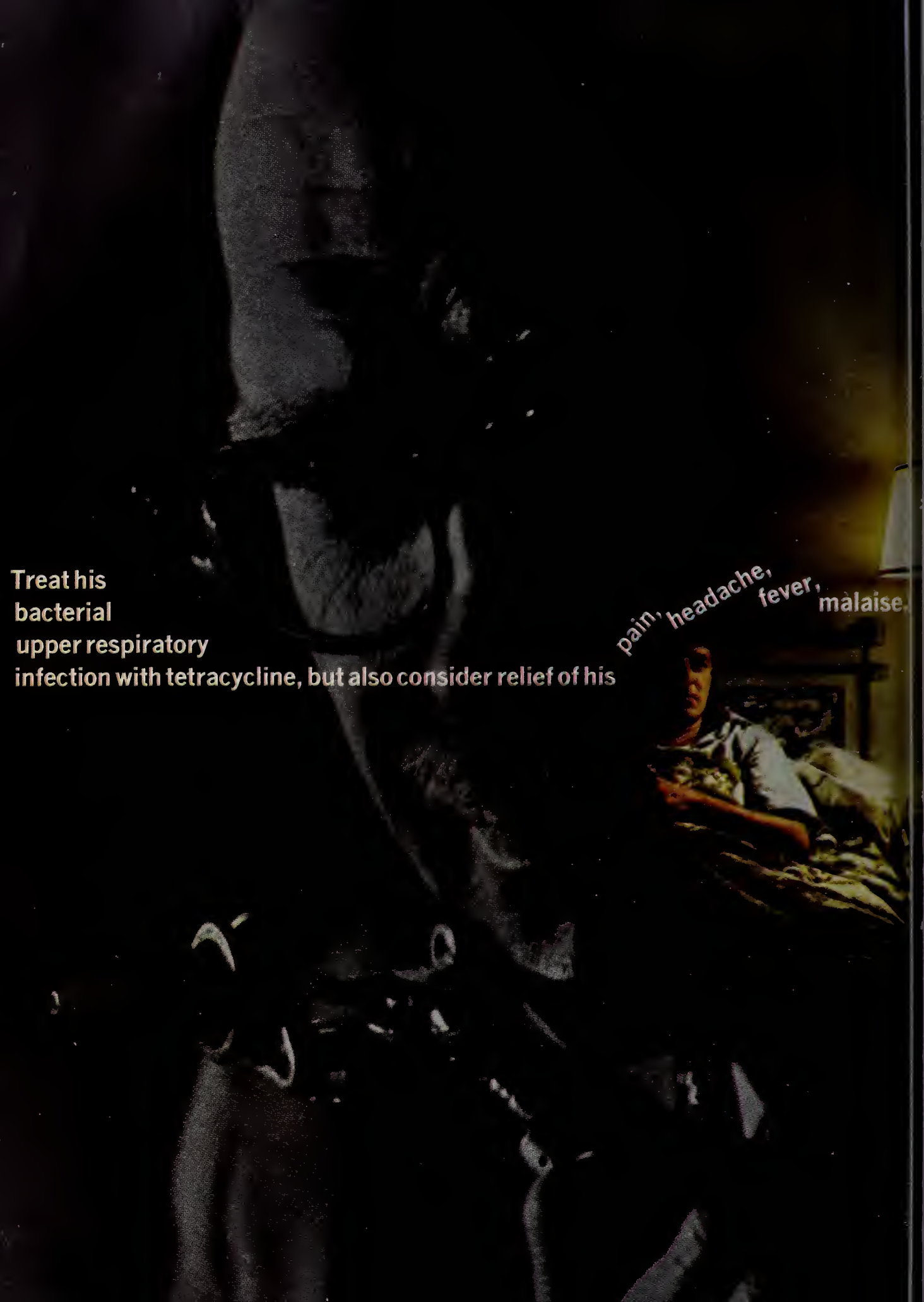
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Treat his  
bacterial  
upper respiratory  
infection with tetracycline, but also consider relief of his

pain, headache,  
fever, malaise.



# NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

February 1966

Dear Doctor:

Deadline for Part 1-B supplementary medical insurance applications for those already 65 on the first of year is March 31. Social Security pays \$3 per month with government matching with another \$3. For those not yet 65 on January 1, the enrollment period is three months before 65th birthday to seven months afterward.

A 10 per cent premium increase will be levied on any applicant for each 12 months he delays in enrolling after eligibility. Hereafter, there will be a general enrollment period from October through December of each odd numbered year.

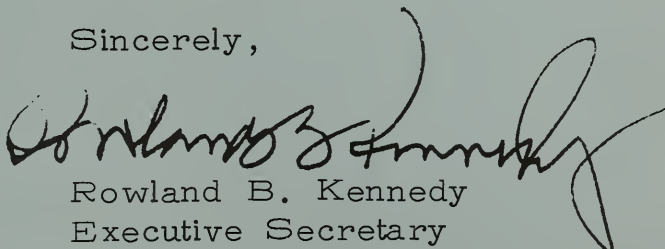
The U.S. Office of Civil Defense has quietly destroyed \$22 million worth of drugs and medical hardware from the CD stockpile. Word was leaked by a senator in letter to the Surgeon General. Materials destroyed were said to be obsolete or expired.

MSMA's local societies are being urged to organize measles immunization campaigns along the lines of the successful Sabin vaccine programs. Idea of locally sponsored, nongovernmental mass assault on measles comes from a resolution at 1965 annual session and studies by Council on Medical Service.

Two \$1,000 scholarships will be awarded by the Medical Library Association and Lederle Laboratories to promising students this year. Applications must be filed by March 1, and forms may be obtained from any ALA-accredited medical library. Scholarship program is a memorial to the late William J. Bishop, distinguished British librarian.

American drug makers are bracing for another Kefauver-type investigation by the Small Business Monopoly Subcommittee. It is known that committee staff has assembled an arsenal of "evidence" on profits from drug patents with allegation that drugs were developed under federal grants. Fact is that 97 per cent of pharmaceutical research is privately financed.

Sincerely,



Rowland B. Kennedy  
Executive Secretary



## DATELINE - MEDICAL AMERICA

### Department Of Agriculture Promotes Cigarette Sales

Washington - It may cause cancer, but smoke anyway. This seems to be the confused policy of the U.S., in spite of official position taken by government after Surgeon General's report on tobacco and health and new cigarette labeling law. The Department of Agriculture has been promoting the sale of American cigarettes abroad, paying Warner Bros. \$106,000 to put scenes in a travelogue to sell fags and spending \$210,000 for cigarette commercials in Japan, Thailand, and Austria. Expenditures were unearthed by Sen. Warren Magnuson, sponsor of the fag pack label warning.

### California Centenarian Signs Up For Part 1-B

Long Beach - Mrs. William Newby called in the district Social Security representative to sign up for Part 1-B of Medicare. She would have enjoyed visiting the office, but since she was 104 last August, she doesn't get around much. On visiting the Newby home, the representative was greeted by the applicant's three daughters, Erema, 82; Edina, 80; and Daisy, 74. He signed them up, too.

### Physicians' Responsibility Under New Drug Laws Is Clarified

Washington - C. Joseph Stetler, president of the Pharmaceutical Manufacturers Association, has emphasized that practicing physicians have no obligations to maintain records under the new drug control law effective Feb. 1 unless they are "regularly engaged in dispensing any such drug or drugs to patients for which they are charged." The PMA president feels that new law will affect very few practicing physicians.

### Smoking Drivers Are More Accident-Prone

New York - A Columbia University safety investigator, Dr. James L. Malfetti, reports finding drivers who smoke involved in 400 per cent more auto accidents than nonsmoking drivers. Main factors implicated are vision impairment from tobacco smoke in a closed car and danger of lighting a cigarette, cigar, or pipe when driving at night.

### First Fiscal Intermediaries Are Named For Medicare

Baltimore - The Social Security Administration has named three major health finance organizations to serve as fiscal intermediaries for hospitals under Part 1-A of Medicare. Selected were the Blue Cross Association whose member plans will represent a majority of U.S. hospitals, and the Aetna Life and Casualty and Travelers Insurance companies to represent other groups and hospitals.





ORIGINAL PAPERS

## Injury to the Popliteal Artery In Mississippi Athletes

BARRY M. GREEN, M.D., and PAUL S. DERIAN, M.D.  
Jackson, Mississippi

FOOTBALL INJURIES can result in catastrophic vascular deficits whether or not the players are in the best of physical condition. Two patients are presented with injuries to the popliteal artery. Both young men eventually required amputations.

### CASE 1

O.W., a white male age 15, was injured during football practice. He was, according to the available information, struck in the left knee region from behind. There was immediate pain with limitation of knee motion. The patient was seen by his coach and referred to a local physician for medical care. Initial examination showed edema in the left popliteal space. There was a decrease in capillary circulation with an absence of the dorsalis pedis and posterior tibial arteries. X-ray examination of the knee showed an anterior displacement of the proximal tibial epiphysis.

Three days after injury, exploration of the popliteal space was done by a general surgeon. At time of surgery arterial exploration showed a massive clot to be present in the popliteal artery (Figure 1). The clot was aspirated both distally and proximally. A second incision was made in the medial malleolar region with exploration of the posterior tibial artery. A large clot was evacu-

ated. Primary closure of the artery was done. No grafts were inserted. The color of the extremity was improved. There was elevation of the skin temperature. No palpable pulses were noted. The patient was heparinized postoperatively.

---

*Any injury of the popliteal space that causes anything less than normal circulation requires immediate surgical consideration. Football injuries can result in catastrophic vascular deficits. Two case reports of injuries to the popliteal artery are reported.*

---

On the first postoperative day the toes were cold and blue. Amputation was necessary. On the fourth postoperative day after demarcation had occurred, a B/K amputation was done. He was eventually fitted with a UCB B/K prosthesis.

### CASE 2

M.J., a 15-year-old white male, was tackled or blocked from the front during football practice producing an hyperextension injury to the left knee. This was in contrast to a flexion knee injury in Case 1. The patient complained of severe pain and tenderness in the left popliteal space. There was marked edema. There were no palpable dorsalis pedis or posterior tibial pulses. The patient was immediately hospitalized.

---

From the Orthopedic Department, University of Mississippi School of Medicine.  
Read before the Conference on Athletic Injuries, Committee on Trauma, Mississippi Chapter, College of Surgeons, Biloxi, May 11, 1965.

X-rays of the knee showed no fractures. One day after injury, exploration of the popliteal space was done by a general surgeon. A complete avulsion of the popliteal vein with thrombosis of the popliteal artery was present. There was intimal rupture of the arterial wall. A large clot was re-

Those which require constant awareness are:

- a. edema in the popliteal region
- b. local pain
- c. fractures or epiphyseal injuries in the region of the popliteal space

## THERAPY

The time elapse between injury and restoration of the peripheral pulses is extremely critical. Jahnke and Howard<sup>1</sup> reported the results of repair of popliteal injuries in the Korean War. If the time between injury and repair was less than 3 hours, there were no amputations. Three to 6 hours delay resulted in 9 per cent amputations, 6 to 9 hours, 5 per cent; 9 to 12 hours, 12 per cent; 12 to 15 hours, 20 per cent and all over 15 hours, 50 per cent.

The amputation rate following ligation of the popliteal artery in World War II was 72.5 per cent. In the Korean War, vascular teams were able to reduce the amputation rate to 21 per cent. How was this done? It was accomplished by repairing the injured artery. In civilian practice, Morris, Beall, Roof and DeBakey<sup>2</sup> were able to restore an immediate pulse in 9 out of 11 cases of popliteal artery injury using either grafts or suture. Two of the 11 cases required amputation (18 per cent).

## OTHER CASES REPORTED

Miller and Freeark<sup>3</sup> reported 6 cases of popliteal artery injury in the young, ranging in age from 5 to 19 years. Two additional cases, ages 26 and 28, were also cited. Of the 11 cases, two amputations were eventually necessary (25 per cent). All the cases showed evidence of ischemia and none were restored to normal circulatory mechanism.

## SUMMARY

Any injury of the popliteal space that causes anything less than normal circulation requires immediate surgical consideration.<sup>4</sup> A team approach (general and orthopedic surgeon) is recommended if a bony deficit is present. In the words of Janes and Ghormley:<sup>5</sup> "Do not delay—do not elevate—do not heat—do not refrigerate." In short, don't procrastinate—operate!

The authors wish to thank Drs. George H. Martin and Donald T. Imrie for making this presentation possible.

★★★

2500 North State St.

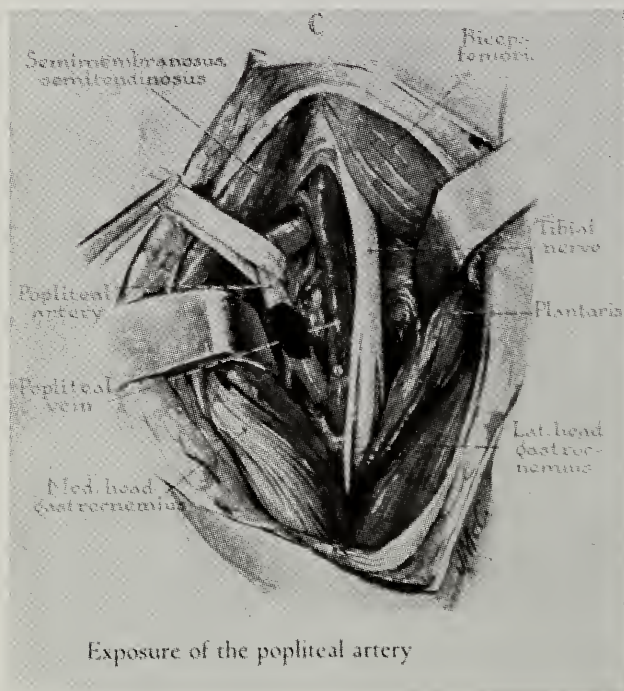


Figure 1. Pictorial representation of the arterial thrombosis.

moved proximally and distally from the artery. Another clot was evacuated from the popliteal vein. Due to the marked arterial contusion two inches of the popliteal artery had to be resected. Replacement was by a reversed saphenous vein graft.

Postoperatively the extremity was warmer but absence of the dorsalis pedis and posterior tibial pulses persisted. The patient was heparinized. A lumbar sympathetic block was done without improvement. Eleven days after injury a B/K amputation was done. At time of amputation there was a massive amount of muscle necrosis. Twenty-nine days after the initial surgical procedure an A/K amputation was advised. The original B/K amputation had failed to heal, necessitating the second procedure.

## DISCUSSION

The subjective and objective findings of popliteal artery injuries are known to all physicians.



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  5. Janes, J. M., and Ghormley, R. K.: Sequelae of Vascular Injuries, *Am. J. Surg.* 80:799-804 (Nov. 15) 1950.
- 

## FINAL FRINGE BENEFITS

Seeking employment, the job applicant asked if the company would pay for medical and hospital insurance. The personnel interviewer said that the employee would have to pay for it, but the premium would be deducted from his paycheck.

"Last place I worked," said the applicant, "the company paid for it."

"Did they pay for your group life insurance, too?" asked the interviewer.

"Sure they did," was the reply. "Not only that, but we got unlimited sick leave, three weeks vacation, Christmas bonuses, coffee breaks—"

"Then why did you leave such a perfect place?" the interviewer asked.

"The company folded."

—James Ward in the *Jackson Daily News*

# Maternal Mortality In Mississippi During 1962

MICHAEL NEWTON, M.D.  
Jackson, Mississippi

THE FOLLOWING is the sixth annual report of studies on maternal deaths in Mississippi conducted by the Committee on Maternal and Child Care of the Council on Medical Service of the Mississippi State Medical Association. The data have been collected in the same manner as in previous years and are reported in the same way, using tables which compare the 1962 data with those for 1961. In addition, comparisons are made with data collected for the five year period, 1957 to 1961, in order to ascertain any long-term trends.

Fifty-three maternal deaths were reported to the committee in 1962, five more than in 1961

TABLE 1  
STUDY MATERIAL

	1961		1962	
	NO.	PER CENT	NO.	PER CENT
Total Cases . . . . .	48	—	53	—
Replies Received . . .	40	83.3	42	79.2
Replies Usable . . . . .	37	77.1	40	75.5

but still slightly below the average of 57 for the five years 1957 to 1961. The total number of births in the state fell from 59,523 in 1961 to 58,921 in 1962. The percentage of replies received to the committee's inquiries and the percentage of usable replies both fell slightly but still remained at a fairly high level (Table 1). The quality of the replies remained essentially unchanged (Table 2). The mean adequacy of the replies was 2.55 as compared with 2.35 for 1961.

There were still only very few maternal deaths in which autopsies were performed. A larger number of the 1962 cases were judged to be direct obstetric deaths (due to the complications of preg-

nancy itself) (Table 3). It may be noted parenthetically that there were no deaths "unrelated" to pregnancy or to the complications or management of pregnancy: this may be due in part to

*Fifty-three maternal deaths were reported to the MSMA Committee on Maternal and Child Care in 1962. For this sixth annual report, the data were collected in the same manner as previous years and are reported in the same way, using tables which compare the 1962 data with those for 1961. In addition, comparisons are made with data collected for the five year period, 1957 to 1961.*

the fact that there is no place on the Mississippi death certificate where the fact that the patient was pregnant can be recorded, unless the pregnancy contributed to the death. Analysis of the causes of the direct obstetric deaths indicated a slight increase in the numbers and percentages of deaths from hemorrhage and toxemia (Table 4).

TABLE 2  
ADEQUACY OF DATA

Category	No.	Per Cent	No.	Per Cent
5 . . . . .	2	5.4	3	7.5
4 . . . . .	5	13.5	3	7.5
3 . . . . .	9	24.3	13	32.5
2 . . . . .	8	21.6	15	37.5
1 . . . . .	13	35.2	6	15.0

Also, slightly more of the 1962 deaths were considered to be avoidable (Table 5): in the two deaths in which avoidability could not be determined, only scanty information was available.

Chairman, Committee on Maternal and Child Care,  
Council on Medical Service.



In assessing the avoidability of a maternal death, the committee also tries to determine what avoidable factors were present, according to the

TABLE 3  
CAUSES OF DEATH

	1961		1962	
	NO.	PER CENT	NO.	PER CENT
Direct Obstetric . . . .	26	70.3	34	85.0
Indirect Obstetric . . . .	10	27.0	6	15.0
Unrelated . . . . .	1	2.7	0	—

AMA Guide for Maternal Death Studies. In general, these can be divided into (A) professional factors, (B) hospital factors, (C) patient factors,

TABLE 4  
CAUSES OF DIRECT OBSTETRIC DEATHS

	1961		1962	
	NO.	PER CENT OF ALL DEATHS STUDIED	NO.	PER CENT OF ALL DEATHS STUDIED
Hemorrhage . . . .	10	27.0	14	35.0
Toxemia . . . . .	9	24.3	11	27.5
Infection . . . . .	6	16.2	4	10.0
Vascular				
Accidents . . . .	—	—	2	5.0
Anesthesia . . . . .	—	—	1	2.5
Other . . . . .	1	2.7	2	5.0

and (D) undetermined factors. One or more avoidable factors may be identified in each case. In 1962 there was a slight increase in each cate-

TABLE 5  
AVOIDABILITY

	1961		1962	
	NO.	PER CENT	NO.	PER CENT
Avoidable . . . . .	29	78.4	34	85.0
Nonavoidable . . . . .	7	18.9	4	10.0
Undetermined . . . . .	1	2.7	2	5.0

gory of avoidable factors as compared with 1961 and with the average for 1957 through 1961 (Table 6). This was probably due to the fact that there was an increase in the number of cases in which more than one avoidable factor was considered to be present (Table 7).

COMMENT

The continuing high level and actual increase in the number of deaths from hemorrhage and toxemia is a matter of concern. It is apparent

TABLE 6  
AVOIDABLE FACTORS (1)

Factors	1957-1961 (Mean)	1961	1962
Professional . . . . .	27	19	30
Hospital . . . . .	4	3	7
Patient . . . . .	18	18	22
Undetermined . . . . .	3	3	0

that, while patient factors such as nonattendance at clinics and doctors' offices account for a modest proportion (37 per cent) of the avoidable factors

TABLE 7  
NUMBER OF AVOIDABLE FACTORS (2)

	1957-1961 (Mean)	1961	1962
One . . . . .	26	17	12
Two or Three . . . . .	13	12	22

determined, yet professional factors involving primarily diagnosis and treatment account for the majority (51 per cent) of the avoidable factors. Admittedly, the committee's judgment is based on ideal circumstances of knowledge, professional ability, and hospital equipment, but some decrease in these factors is certainly possible under ordinary circumstances, and this should result in a reduction in deaths from these two chief causes.

SUMMARY

1. Fifty-three maternal deaths occurring in Mississippi during 1962 have been studied by the Mississippi State Medical Association's Committee on Maternal and Child Care.
2. Forty usable replies to the Committee's inquiries have been reviewed. A slight increase in deaths from hemorrhage and toxemia was noted.
3. The type of avoidable factor, in those deaths considered avoidable, has been discussed. ★★★

2500 North State St.

# Radiologic Seminar XLVI: Intestinal Malrotation And Neonatal Duodenal Obstruction

ROBERT R. SURRATT, M.D.  
Jackson, Mississippi

NEONATAL VOMITING, particularly of bile, should alert the physician to the possible surgical emergency of duodenal obstruction. One form of duodenal obstruction results from the pressure of peritoneal bands accompanying intestinal malrotation. In malrotation the duodenum descends on the right and the proximal small bowel is within the right abdomen. The distal small bowel and colon are on the left. Location of the cecum may vary along a line from the left upper quadrant across the abdomen down to the lower right quadrant. Alone this arrangement would produce no difficulty but frequently peritoneal bands between cecal and duodenal areas produce duodenal obstruction. In addition poorly developed mesentry and mesenteric attachments predispose to volvulus of small bowel and colon.

## DIAGNOSING OBSTRUCTION

Often the diagnosis of duodenal obstruction can be made from plain erect and supine abdominal films. On the left is the air-filled stomach. A second smaller shadow on the right represents air within the duodenum proximal to the obstruction. This pattern produces the "double bubble sign" of duodenal obstruction and is even more obvious when air is injected after aspiration of secretions by a nasogastric tube. Opaque media, innocuous to the lung, can be used after thorough gastric aspiration. A barium enema may aid in proving malrotation.

The exact type of duodenal obstruction may only be established at the time of surgery. Annular

pancreas and reduplication of the duodenum may also produce extrinsic obstruction. Webs, diaphragms and atresia produce intrinsic forms of obstruction. In some instances double lesions may occur with both intrinsic and extrinsic obstruction present.

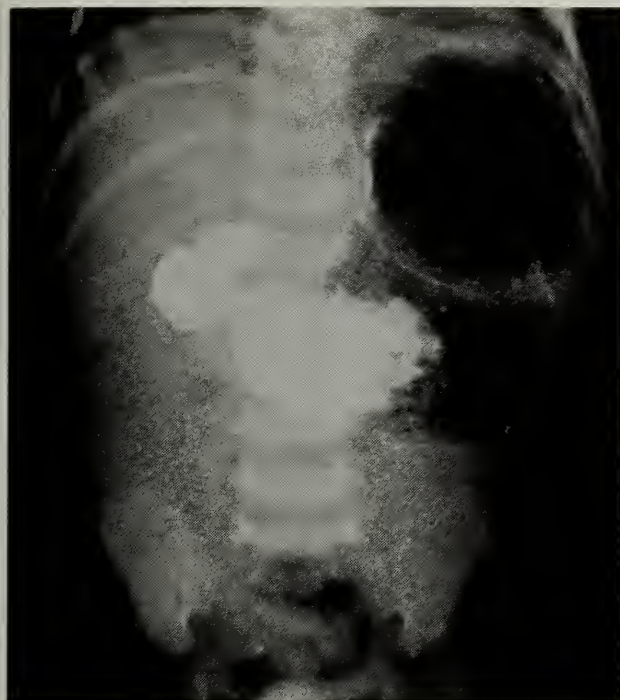
The surgical management of malrotation obstruction consists of a careful search of the entire



*Figure 1. Plain film showing air within stomach and duodenum above obstruction. Air in distal bowel indicates incomplete obstruction.*

Sponsored by the Mississippi Radiological Society.





a



b

Figure 2 a & b. Opaque media after gastric aspiration showing a high degree of obstruction of the third duodenal segment.

bowel for volvulus or additional congenital abnormalities and freeing all peritoneal bands. Correction of the malrotation is not possible. Stabilizing the bowel to prevent future volvulus is attempted by allowing the duodenum and jejunum to descend on the right and placing the cecum within or toward the left upper quadrant.

### CASE REPORT

A Negro male infant was admitted to Holmes County Hospital in Lexington with a history of scanty stools and vomiting since midwife delivery two weeks earlier. The child responded poorly, was dehydrated and in electrolyte imbalance. Vomitus was positive for bile. Radiographic studies (Figures 1 and 2) showed almost complete obstruction of the third duodenal segment. Surgery revealed malrotation with the cecum

located to the left of the midline. Peritoneal bands obstructing the duodenum were severed with complete relief of obstruction. No additional abnormalities were found. Recovery was uneventful with discharge seven days after admission. ★★★

4531 Brook Drive

*The author wishes to express his appreciation to Drs. Charles W. Campbell and Paul B. Brumby for supplying the clinical data and surgical notes for this case.*

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2. Hope, John W., and O'Hara, A. Edward: Diagnosis of Intestinal Obstruction of the Newborn, *Radiology* 70:349-361 (March) 1958.
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# Clinicopathologic Conference LXXIII

Conducted by the Department of Pathology  
St. Dominic-Jackson Memorial Hospital  
Jackson, Mississippi

*Dr. Robert R. Gatling:* "This is the first of what I hope will be a long and stimulating series of clinicopathologic correlation exercises. Whenever a clinician is available to discuss the clinical aspects, the customary protocol will be adhered to; otherwise the history and physical examination, the laboratory data, and course in the hospital will be presented by the pathologist as the first portion of the conference. The second phase will include the autopsy findings, illustrated by appropriate slides. The third phase will consist of a discussion of the correlation of autopsy findings with pertinent clinical aspects of the case, including x-ray findings and clinical laboratory data.

"The case to be discussed today is that of a 68-year-old man with upper abdominal discomfort of at least two years' duration, bilateral foot drop, and diabetes.

## SUMMARY OF HISTORY

"The patient was admitted June 6, 1965, expired June 11, 1965. This 68-year-old man was admitted to St. Dominic Hospital on the final occasion because of fever, chills, sweats, and generalized aching of three days' duration. He had experienced moderate anorexia and slight nausea but no vomiting. Peripheral neuropathy developed in 1963 which progressed to foot drop. At that time he underwent an exploratory laparotomy with splenectomy and appendectomy but with no apparent success at diagnosis of his malady. Following that siege he apparently got along fairly well until the onset of the present illness. His 'polyneuritis,' however, apparently slowly progressed, and numbness and paresthesia of his hands ensued.

"Physical examination at the time of admission revealed the blood pressure to be 154/74, temperature 100°, pulse 100 per minute, and respirations 24 per minute. The pupils were equal, reg-

ular, and reacted to light and accommodation. The lungs were clear and resonant. Moist rales were audible over the right base posteriorly. The heart was regular and of normal size. No murmurs were heard. The liver was palpated three finger breadths below the right costal margin. No abdominal tenderness was elicited, and no dis-

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*The patient in CPC LXXIII is a 68-year-old man with upper abdominal discomfort of at least two years' duration, bilateral foot drop, and diabetes.*

*Discussers are Drs. Robert R. Gatling, John W. Evans, and George F. Smith.*

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tention was observed. Moderate foot drop was bilateral. Deep tendon reflexes of the lower extremities were decreased or absent. Proprioceptive reactivity of the extremities was decreased.

## LABORATORY DATA

"The hemoglobin was 13.6 gm. per cent, hematocrit 43 per cent, platelets, normal and WBC 21,900. The differential revealed lymphocytes 16 per cent and neutrophils 84 per cent. Urinalysis showed specific gravity 1.014, albumin negative, sugar negative, and microscopic negative. Porphobilinogen test on urine was negative.

"Blood chemistry studies showed BUN 15 mg. per cent, fasting blood sugar 57 mg. per cent, alkaline phosphatase 21 Bodansky units, total cholesterol 112 mg. per cent and total protein 5.31 gm. per cent with the albumin to globulin ratio of 2.85:2.46. Total bilirubin was 1.43 mg. per cent; the direct reading was .65 mg. per cent. BSP retention was 39.5 per cent. Cephalin flocculation was 1+ at 48 hours. Glucose tolerance



revealed a diabetic-type curve. VDRL was non-reactive.

"Dr. John W. Evans will discuss the roentgenographic findings."

*Dr. John W. Evans:* "A radiograph of the chest done on admission revealed the heart to be within normal limits in size and contour. The left lung field was clear; the right lung field was also clear except for a band of atelectasis overlying the right leaf of the diaphragm. The right leaf of the diaphragm showed slight elevation and fluoroscopy demonstrated no differential in the degree of movement during respiratory excursions when compared to the left side. The degree of elevation was compatible with the presence of a slightly enlarged liver as mentioned in the protocol."

### HOSPITAL COURSE

*Dr. Gatling:* "The patient continued to complain of generalized aching throughout the hospital stay and required analgesia at intervals. At one time he complained of shortness of breath. Although his fever spiked to 100.4° on the day following admission, the last two days were characterized by absence of temperature elevation above 98.4°. His status remained essentially unchanged until he was turned on his side for the purpose of changing bed linen. When he was turned back on his back, breathing had ceased. Resuscitative efforts were not fruitful, and he was pronounced dead at 6:00 a.m. on June 11, 1965."

### AUTOPSY FINDINGS

"At autopsy this patient was found to have an adenocarcinoma arising from the body of the pancreas. The tumor was poorly differentiated and consisted principally of sheets of neoplastic cells. The syndrome thereby produced was classic in that there was a paucity of symptoms, peripheral venous thrombi, pulmonary emboli and massive hepatic metastases. The 7 × 4 × 4 cm. tumor mass, not palpable through the abdominal wall or gastro-colic omentum, was confined to the body of the pancreas and did not extend beyond its borders. The pancreas distal to the tumor had undergone atrophy associated with ductal ectasia, fibrosis, and preservation of the islets of Langerhan's. This is what happens following pancreatic duct obstruction. Although no mention is made of the identification of venous thromboses in the autopsy protocol, the presence of pulmonary emboli, old and recent, attested to their existence and served

to explain the mechanism of periods of breathlessness of which he complained.

### OLD THROMBUS

"The anterior descending coronary artery was occluded by an old, recanalized thrombus. An old, avascular scar occupying the anterior two-thirds of the septum testified as to the effect of the thrombus. The small blood clot within the right coronary artery probably represented an embolus arising from one of the pulmonary veins. A section made from the right ventricle revealed increased eosinophilia of the muscle fibers, nuclear pyknosis, and interstitial edema. These changes are those of an early acute infarct and were not detected on gross examination. The infarct was estimated to be about 24 hours old. One small, isolated, fairly fresh renal infarct was also present which probably resulted from a small embolus, but this could not be documented. The age of this infarct was approximately the same as the one present in the myocardium."

"Numerous pulmonary emboli, both old and recent, were also found. One embolus was quite large, nonadherent and occluded a primary branch of the pulmonary artery."

"A section of kidney revealed a depressed scar extending through the cortex. All tubules and glomeruli of the midportion had disappeared. An exudate of lymphocytes was present within the surrounding interstitial tissue. This infarct was at least three or four weeks old as compared with the fresh infarct of 24 hours that was just mentioned."

"An adenomatous polyp from the colon measured less than 1 cm. in greatest dimension. It was located in the sigmoid colon, and its histologic benignancy was indicated by the uniformity of glands and cellular staining."

"A section of bone marrow was of approximately 85 per cent cellularity as compared with the normal 30 to 40 per cent. Both erythropoiesis and granulopoiesis appeared increased."

### MUSCLE ALTERATION

"Last, but not least, was an interesting alteration of the skeletal muscle. The fibers were fragmented; the sarcolemmal nuclei were hyperplastic, and many fibers appeared to have withered away. Whether the numerous small round cells present represented sarcolemmal cells or lymphocytes was difficult to ascertain. The source of this biopsy was the gastrocnemius. A section taken from the

diaphragm showed no alteration. A section of nerve revealed uneven distribution of the fibers, but each fiber contained an axis cylinder. Dr. George F. Smith will have a few words to say about myopathy, myositis and neuropathy a little later.

"The final diagnoses are:

1. Adenocarcinoma of the pancreatic body with hepatic metastases
2. Pulmonary emboli, recent and old
3. Myocardial infarcts, recent and old
4. Renal infarcts, recent and old
5. Adenomatous polyp, sigmoid colon
6. Leiomyoma, gastric cardia
7. Bone marrow hyperplasia
8. Peripheral myositis

### DISCUSSION

"The immediate cause of death no doubt was cardiac standstill or ventricular fibrillation. This could have been brought about by the myocardial infarct, but pulmonary embolism can also produce sudden death apparently by vagal reflex; so two conditions were present, either of which could have been fatal. The principal, although indirect, cause of death, however, was carcinoma of the pancreatic body with hepatic metastases and the associated thrombo-embolic phenomenon. The postulated reason for more widespread hepatic metastases from carcinoma of the pancreatic body as compared with the head and tail is invasion of the splenic vein as it lies in contact with the body.

"Granulocytic hyperplasia of the bone marrow probably was initiated by tumor necrosis; erythrocytic hyperplasia could have been initiated by pulmonary emboli.

"A few additional words concerning correlation of the clinical laboratory data and anatomic disease seem appropriate at this point. It may be recalled that the serum albumin was significantly decreased, that the BSP retention was 39.5 per cent as compared with a normal of 5 per cent, and that the serum bilirubin was 1.43 mg. per cent as compared with the upper normal of 1.2 mg. per cent. The cephalin flocculation was normal, and the alkaline phosphatase was 21 Bodansky units as compared with a normal of 6 units. Diminution of albumin, elevation of BSP, and normal cephalin flocculation all point to diminution of normal functioning liver tissue and absence of liver cell necrosis and can be explained by extensive liver metastases from the pancreatic tumor. The min-

imal elevation of serum bilirubin emphasizes the much greater sensitivity of BSP retention as an index to the functional potential of the hepatic parenchyma.

"Dr. Evans, do you have any comments concerning x-ray diagnosis of carcinoma of the pancreatic body and pulmonary embolization?"

*Dr. Evans:* "The diagnosis of tumors of the body and tail of the pancreas is extremely difficult from a radiological point of view. It is dependent upon demonstrating certain effects produced on the stomach and adjacent colon. These organs, of course, have to be filled with radiopaque media such as barium. The stomach and colon are subject to all sorts of anatomic variation in relation to the region of the body of the pancreas. It is true that when one has a high index of suspicion from the clinical information available, certain special procedures in positioning and measurements are available which are sometimes helpful in the diagnosis. No radiographic study of the gastrointestinal tract was done on this particular patient, however."

*Dr. Gatling:* "Doctor Smith, I believe you have some information on diagnosis and certain features of polymyositis or myopathy associated with visceral carcinoma and of diabetic neuropathy."

*Dr. George F. Smith:* "Occasional occurrence of neuropathy and/or myopathy associated with visceral carcinoma is well documented, although the exact relationship is not understood. The initial manifestation may be either that of myopathy or neuropathy, or both may occur simultaneously. Neuropathy may present as either sensory or motor deficit, or both. Although muscle changes may occur first in distal areas, proximal muscle groups may represent the initial site. Viewed objectively, these seemingly conflicting statements point out the heterogeneous pattern of involvement and the nonspecificity of the entity. The present available information indicates that occult visceral carcinoma should be considered in any patient over 40 years of age with findings of neuro-myopathy, irrespective of pattern.

### ETIOLOGIC DIFFERENTIATION

"Since this patient also was afflicted with diabetes, one should consider diabetic neuropathy. It appears that the differentiation is principally etiologic and not anatomic or clinical. We, therefore, find ourselves in the dilemma of nonspecificity of findings in the presence of two etiologies which we cannot differentiate." ★★★

969 Lakeland Dr.



# Proceedings of the House of Delegates

Special Session  
December 16, 1965  
Jackson, Mississippi

A SPECIAL SESSION of the House of Delegates of the Mississippi State Medical Association was convened, in pursuance to lawful notice given, on December 16, 1965, on the Heidelberg Roof of the Hotel Heidelberg at Jackson, Mississippi, at 1:08 o'clock in the afternoon, by Dr. Everett Crawford, the President. The invocation was spoken by Dr. Howard A. Nelson of Greenwood.

Dr. Crawford extended greetings to members of the House and observed that the present special session is the first of record which can be discovered in the 62 years of the House of Delegates' existence. He stated that the business before the House related to Public Law 89-97, the Social Security Amendments of 1965. He presented the Vice Speaker of the House of Delegates, Dr. William E. Lotterhos of Jackson, and the Speaker, Dr. Nelson, who assumed the chair. Dr. James L. Royals, Chairman of the Reference Committee on Credentials, reported the presence of a quorum of registered and seated delegates in accordance with Section 3, Chapter V, of the By-Laws of the association.

The Speaker announced that since the present meeting was a special session, there would be no action with reference to the Transactions of the 62nd Annual Session of the House of Delegates at the 97th Annual Session of the association, Biloxi, May 10-13, 1965.

## ACTIONS OF THE HOUSE OF DELEGATES

It was announced that the Vice Chairman of the Board of Trustees, Dr. Lamar Arrington of Meridian, was unavoidably absent because of the death of his sister. Other announcements informed the delegates that their colleagues, Dr. A. L. Gray of Jackson and Dr. Eugene A. Bush, Sr., of Laurel, were hospitalized. The House directed that appropriate messages be sent to each of the three physicians.

## ANNOUNCEMENT OF REFERENCE COMMITTEES

### Reports of Officers and Board of Trustees

Lawrence W. Long, Jackson, Chairman  
Eldon L. Bolton, Biloxi  
Stanley A. Hill, Corinth  
William E. Lotterhos, Jackson  
Guy T. Vise, Meridian

### Credentials

James L. Royals, Jackson, Chairman  
Arthur A. Derrick, Jr., Durant  
C. D. Taylor, Jr., Pass Christian

### Rules and Order of Business

John G. Egger, Drew, Chairman  
George F. Archer, Greenville  
Paul B. Brumby, Lexington

## REPORT OF THE REFERENCE COMMITTEE ON RULES AND ORDER OF BUSINESS

To assist the Speaker and Vice Speaker in the orderly conduct of the proceedings of this House of Delegates, your Reference Committee on Rules and Order of Business makes the following recommendations:

*Conduct of Business.* The business of the House should be conducted according to *Robert's Rules of Order, Revised* and the Speaker and Vice Speaker should prescribe the order of business as set out in the By-Laws. To insure proper recording of the transactions, all delegates recognized should identify themselves. Except for those having an official capacity with the association, unanimous consent should be obtained for extending the privilege of the floor to non-members of the House of Delegates. The report of the Reference Committee on Credentials should constitute the formal roll call.

*Reports.* This is a Special Session of this House of Delegates called under provisions of Section 2, Chapter II, By-Laws MSMA, to consider Public

## HOUSE OF DELEGATES / Continued

Law 89-97. All reports and resolutions should be germane to this subject and should be referred to the Reference Committee on Reports of Officers and Board of Trustees. Reports should be identified by title and number and read clearly. Debate should be reserved until such time as this House of Delegates recesses and the Reference Committee on Reports of Officers and Board of Trustees convenes in this same room to conduct formal hearings.

*Resolutions.* To avoid an extended meeting of this House of Delegates and to insure that all interested members have adequate opportunity to discuss their views, the House should permit no introductions of resolutions after this initial meeting.

The report of the reference committee was adopted.

### ADDRESS OF THE PRESIDENT

*Dr. Everett Crawford:* Yesterday, on December 15, our Mississippi State Medical Association celebrated its 109th anniversary, having been founded on that date in 1856. As we convoke this Special Session of the House of Delegates in the closing hours of the year, I believe it fair and reasonable to say that never before in our history—nor in the history of American medicine—have we been faced with issues of greater import.

I am also of the opinion that, despite the gravity and complexity of the issues before us, we have the means, the will, the courage, and the capacity to meet and deal effectively with the challenges of the day. It is not the property of medicine to shrink from responsibility, to ignore reality, nor to sidestep a decisive course of action. Were it otherwise, we would not be convened in this Special Session.

Public Law 89-97 is an accomplished fact. Much accurate information on its complex provisions has been published. Unfortunately, there has been much misunderstanding about it, too. My task is to bring before you in concise format exactly what the law is. The leadership of your association has been serious and dedicated in its studies and reasoned consideration of the issues which we will consider today. Your Board of Trustees met twice in a three week period immediately prior to this Special Session. Your officers have attended a number of national meetings and conferences. There have been two special conventions of the AMA House of Delegates in addition to the usual annual and clinical conventions. Our Council on Medical Service has been diligent in its work in this connection.

Public Law 89-97 became a statute on July 30, 1965, evolving from eight years of debate in the Congress. It bears little resemblance to the Forand and King-Anderson bills of the late 1950's and early years of the present decade. The new law is essentially a medical care financing mechanism, and we are concerned with those portions identified as Part 1-A and Part 1-B at the present Special Session. I shall, however, discuss other portions to place the enactment into a fuller perspective.

The law has four titles or divisions and is formally designated "The Social Security Amendments of 1965." It treats the Social Security Act in a broad manner with respect to addition of new programs, and it alters many existing programs. It is important for us to appreciate that Social Security is much more than a cash benefit for those of a certain age who have fulfilled prior requirements of taxation over a stated period of years. The original enactment in 1935 carried 14 titles, including the public welfare programs which are basically apart from the present consideration of a medical care financing program for those over age 65.

The first title in Public Law 89-97 is a health care financing program for those over age 65. Part 1 has three subparts, A, B, and C. Part 1-A is the hospital care financing program available on a statutory basis to all individuals over age 65. Part 1-B is a voluntary program to which eligible beneficiaries may subscribe if they so elect. It provides payment for physicians' services and certain other physician-prescribed services. Part 1-C is a section containing legal definitions of the two preceding parts.

Part 2 of the first title establishes a new program to replace eventually existing programs of medical care under public assistance. No portion of this part, which has been incorporated into the Social Security Act as Title XIX, may be implemented until a state legislature has acted upon it.

The second title amends the Maternal and Child Health and Crippled Children's programs, extends the grant program previously established in connection with mental retardation, revises programs relating to care of tuberculosis and mental disease, and establishes certain study programs.

The third title amends Title II of the Social Security Act with reference to cash benefits, includes self-employed physicians, and increases the taxable wage base from \$4,800 to \$6,600 per year. A schedule of taxation as far ahead as 1987 has been included.



The fourth title amends existing public assistance programs, and it increases the amount of federal grants to the states.

Our chief concern at the present Special Session is with Part 1 of the first title which has been incorporated into the Social Security Act as Title XVIII.

Under Part 1-A, a beneficiary is eligible for up to 90 days of hospital care during any spell of illness. The latter is defined as a period of consecutive days beginning with the first day that an individual is an inpatient and ends at the close of 60 days after he is discharged from a hospital or extended care facility, meaning a skilled nursing home. The patient is required to pay the first \$40 as a deductible and \$10 per day after 60 days.

Second, the patient is entitled under Part 1-A to up to 100 days in an extended care facility or nursing home with the precondition of having first been hospitalized for at least three days. The nursing home must be under medical or physician supervision, maintain medical records, and have in effect a transfer agreement with a hospital. A charge of \$5 per day is made after the first 20 days.

Third, the beneficiary is entitled to outpatient diagnostic services at a hospital. A deductible of \$20 is charged, and the patient pays 20 per cent of all such charges after the first \$20 for the outpatient diagnostic services.

Fourth, the patient is entitled to 100 home health visits in any one year period after discharge from a hospital or extended care facility. Such services include part-time or intermittent nursing care; physical, occupational, or speech therapy; and medical supplies other than drugs and biologicals. All such services must be under the supervision of and prescribed by a physician. Home health agencies may be public or private organizations. With reference to Part 1-A only, the Mississippi State Board of Health would probably be the only such qualified agency in our state.

For the purposes of Part 1-A, a hospital is defined in the classic sense to include registered nursing service, medical records, organized medical staff, and state licensure. All hospitals accredited by the Joint Commission on Accreditation of Hospitals will meet eligibility requirements, and criteria prescribed for participation may be no higher than requirements for accreditation. Of course, this does not and will not preclude participation by other hospitals as will be subsequently defined in regulations.

In addition, a hospital must have a utilization review plan, as is true of an extended care facility or nursing home. Such plans must provide for review on a sample or other basis the following: Admissions to the institution, duration of stay, and professional services furnished (including drugs and biologicals), all with respect to medical necessity and for promoting the most efficient use of available facilities and services.

The utilization review committee must have two or more physicians among its membership.

Under the law, hospitals and nursing homes may nominate their own fiscal intermediary or even deal directly with the Department of Health, Education, and Welfare. In Mississippi, a vast majority of our hospitals have nominated Blue Cross in this capacity. Hospitals will be reimbursed on a basis of reasonable cost incurred in providing the several services authorized under the law.

Of particular importance under Part 1-A is the matter of certifying which institutions in a state are to be legally defined and, accordingly, treated as hospitals and nursing homes. A section requires the Secretary of Health, Education, and Welfare to make an agreement with the state health agency (Board of Health) in states willing and able to do so under which the Board of Health would perform three important functions: Certifying which institutions are hospitals and extended care facilities, providing consultative services in connection with utilization review activities, and generally assisting by providing information enabling institutions so desiring and so qualified to participate in the program.

Our Board of Trustees has recommended that the Mississippi State Board of Health conduct this activity in our state.

Of most immediate concern to our association is Part 1-B, the voluntary insurance plan for financing physicians' services. Individuals aged 65 and over are eligible to purchase on a voluntary basis this coverage which costs \$3 per month from the individual with the government paying a like amount. The initial enrollment period is now underway, and of those responding to the opportunity to purchase the coverage, about 87 per cent in Mississippi are doing so.

Part 1-B will pay for physicians' services on a reasonable charge (as opposed to "cost" for hospitals) basis, and there is no fee schedule. There is, however, a utilization review requirement with the same objectives as for hospitals. This function will be performed by the "carrier" or fiscal intermediary. The plan will pay for four broad cate-

## HOUSE OF DELEGATES / Continued

gories of professional services by or under the direct supervision and prescription of a physician.

The first is the professional services of physicians whether rendered in the hospital, at the office, or during home calls.

The second is outpatient diagnostic services as may be performed by the physician, or ordered by him.

The third is home health services, up to 100 visits in any one year, as directed by the physician. This differs from the identical provision of Part 1-A in that the patient need not first have been hospitalized.

Fourth, Part 1-B provides for prosthetic appliances, excluding dentures, eyeglasses, and hearing aids.

Under the voluntary plan, the patient pays an annual—once a year—deductible of \$50 and 20 per cent of charges thereafter.

Unlike the hospital portion of the program, no physician will deal with the government. In all cases, the Secretary must appoint a “carrier” or fiscal intermediary. Such an organization may be a voluntary association, corporation, partnership, or other nongovernmental agency which is engaged in a medical care financing program.

The carrier or fiscal intermediary must also conduct utilization review functions with respect to Part 1-B under the same criteria as are prescribed for hospitals under Part 1-A. The importance of the fiscal intermediary’s organization, medical orientation, and attitude cannot be over emphasized. The intermediary must make the determination of reasonableness of charges by physicians and will actually receive their claims and make payment to them.

We are naturally concerned in Mississippi with whom the fiscal intermediary shall be, and our Board of Trustees will bring formal recommendations before this House of Delegates in this connection, carefully detailing the reasoning and thinking for such recommendations.

Other portions of Public Law 89-97 are of interest to our association. The second part of the first division, called Title XIX, in effect extends the Kerr-Mills principle to all categories of welfare recipients. Among these are Old Age Assistance, Aid to Dependent Children, Assistance to the Permanently and Totally Disabled, and Aid to the Blind.

Since 1950, the law has provided for vendor medical programs for these four categories. The expression “vendor” simply means payment to the

provider or vendor of the care. A majority of states—Mississippi excluded—have implemented such programs.

In 1960, the Kerr-Mills program was enacted. Under this, those individuals over age 65 who receive no welfare benefits but who may, at one time or another, need help in meeting part or all of their medical expenses, may receive such help. Kerr-Mills, as you are well aware, has been endorsed by this House of Delegates. All but 10 states have Kerr-Mills programs in operation.

In 1964, a Kerr-Mills or Medical Assistance for the Aging law was enacted by our state legislature, but funds for its implementation have never been appropriated. We have only a token program for Old Age Assistance and Aid to the Blind which is not MAA. Our policy position is such that we can support this extension when and if the legislature considers it. The new Title XIX requires all states to implement its provisions by 1970 or suffer a withdrawal of funding for the several vendor medical programs.

It is, however, important to understand and fully appreciate that no program of medical care for the public assistance categories may be implemented in any state unless the legislature enacts it and appropriates the necessary state matching funds. This is true at this moment as it has been since 1935 when the categories were initially established in the original Social Security Act.

It is only natural that practicing physicians have questions about this and other programs under the support of public funding. Since their professional services are purchased, many raise logical questions about fees, claims submission, and methods of payment.

As with programs of voluntary prepayment and voluntary health insurance, most physicians will elect to employ the convenience of submitting a claim for services rendered to the fiscal intermediary. This is, in effect, an assignment, and in all such cases, the fiscal intermediary will make payment by check directly to the physician. It is provided, however, that the fiscal intermediary may make payment to the beneficiary on the basis of the physician’s receipted bill.

No physician is obliged to treat patients under this—or for that matter, any other—medical care financing program. This basic tenet has been stated and restated, and let there be no misunderstanding about it now. The Principles of Medical Ethics provide that: “A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability.”



This House of Delegates has proclaimed this principle. The AMA House of Delegates has proclaimed this principle. And there is not a line in the 138 pages of Public Law 89-97 requiring any physician to care for patients under any phase of this program against his personal wishes or professional desires.

In making the decision to call this Special Session of the House of Delegates, the Board of Trustees and your principal general officers come before you offering the best we have in leadership, inviting your discussion, asking for your comment, seeking your advice, and giving you a stewardship accounting of having diligently sought the facts.

I believe in the proud record and the rich heritage of our Mississippi State Medical Association. I believe that you will undertake these deliberations today with sincerity, honor, realism, and the capacity that characterizes our profession.

#### REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee expresses deep appreciation to Dr. Everett Crawford, our President, for his informative, factual, and illuminating address. In this presentation, he has furnished us a succinct, yet lucid, description of the provisions of Public Law 89-97. This background of information has been helpful in our deliberations, and we recommend that members of this House of Delegates retain their copies of the address for use in discussing the law before local medical bodies.

We approve the Address of the President, and your committee is glad to learn that it will be published in our JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION.

The report of the reference committee was adopted.

#### REPORT OF THE BOARD OF TRUSTEES

*Dr. John B. Howell, Jr.: Background.* At the 97th Annual Session, May 1965, the Council on Medical Service presented Supplemental Report A, recommending to the House of Delegates that the association qualify as fiscal intermediary for the voluntary insurance program (covering physicians' services only) in the then-pending H.R. 6675, Medicare. The reference committee approved the report and recommended its adoption, but during debate before the House of Delegates, the report was tabled.

*Public Law 89-97.* Subsequently, the Congress enacted H.R. 6675, and on July 30, 1965, the bill was signed into Public Law 89-97. The measure,

entitled "The Social Security Amendments of 1965," is an extensive one which encompasses many areas of the existing Social Security program and which has introduced a program of medical care financing for those over 65 under the new Title XVIII.

(a) *Part 1-A.* The first portion of the title provides for hospital care financing for beneficiaries up to a maximum of 90 days for any spell of illness with the patient paying an initial deductible of \$40 and a charge of \$10 per day for each day of hospitalization over 60 days. After at least three days of hospital stay, the patient becomes eligible for post-hospital extended care in a skilled nursing home for a maximum period of up to 100 days with the patient paying a charge of \$5 per day for each day of care over 20 days. Other benefits under Part 1-A include outpatient hospital diagnostic services and post-hospital home health services. In the case of the former, the patient pays the first \$20 of the outpatient diagnostic service and 20 per cent of the charges above \$20.

(b) *Part 1-B.* At the option of the eligible beneficiaries, they may elect to purchase on a voluntary basis the supplementary medical insurance plan at a cost of \$3 per month to the beneficiary with the government paying an equal amount. This program pays reasonable charges on a usual and customary basis for the following:

- (1) Physicians' services, whether rendered in or out of the hospital.
- (2) Outpatient diagnostic services.
- (3) 100 home health visits annually without the precondition of hospitalization.
- (4) Prosthetic appliances, excluding dentures, eyeglasses, and hearing aids.

Under the voluntary insurance plan, the beneficiary pays a single annual deductible of \$50 and 20 per cent of charges thereafter. P.L. 89-97 places the obligation upon the Secretary of Health, Education, and Welfare to appoint a carrier to act as fiscal intermediary to administer Part 1-B in states or other appropriate geographic areas.

*Role of Carriers.* The capacities, attitude, and range of professional relationships possessed by a carrier are of the highest importance to physicians providing care for eligible beneficiaries. A carrier, according to the law, must be "a voluntary association, corporation, partnership, or other non-governmental agency which is lawfully engaged in providing, paying for, or reimbursing the cost of health services. . . ." A number of important functions accrue to the carrier in the course of fulfilling his contract as he serves physicians and patients. Among these are:

## HOUSE OF DELEGATES / Continued

(a) Making determination of the rates and amount of payments to be made to physicians on a basis of reasonable charges. There is no fee schedule in the program, but there must be a continuing scrutiny of reasonableness in the charges.

(b) Receiving, disbursing, and accounting for funds in making such payments to physicians.

(c) Determining that the requirements of utilization review are fully met with reference to the care rendered.

(d) Serving as a channel of communication with the practicing medical community and assisting in the organization of utilization review mechanisms where and when necessary.

(e) Handling of grievances, including the granting of a fair hearing when the matter of payment for services may be in controversy.

(f) Furnishing such timely reports and studies with reference to the program as may be necessary.

(g) And otherwise assisting in such other ways as will aid all concerned in carrying out the program.

*Utilization Review.* P.L. 89-97 provides for a system of utilization review which will examine on a sample or other basis admissions to hospitals and nursing homes; the duration of stay therein; and professional services furnished, including drugs and biologicals; all with respect to the medical necessity of services and for the purpose of promoting the most efficient use of available health facilities and services. A utilization review committee must include two physicians, but others—and these may be nonphysicians—may also serve on such committees. Obviously, the composition of a utilization review committee with reference to the carrier for Part 1-B, physicians' services, will reflect the character and composition of the carrier's organization.

*American Medical Association.* The AMA House of Delegates has met on four occasions during 1965, to include the annual and clinical conventions and two special conventions. The issue of P.L. 89-97 has been uppermost in each of these meetings. Of particular significance is a policy statement adopted at the October 2-3 special convention:

"The American Medical Association shall continue to meet with representatives of agencies and departments of the federal government, to participate in such advisory committees which are created, and to contribute whatever advice and suggestions are deemed advisable and necessary in

the formulation and revision of regulations which will help it achieve medicine's objectives on behalf of the public and profession.

"The American Medical Association urges every physician, regardless of the extent of his involvement, to render whatever advice and assistance he can so that regulatory changes and/or legislative modifications may be suggested or sponsored by the American Medical Association in order that the best interests of the public and the profession may be protected in the provision of medical care."

The AMA House has urged that utilization review committees be composed of practicing physicians and that medical orientation and, where possible, medical control be paramount in the administration of the voluntary insurance program under P.L. 89-97. AMA is fulfilling its national-level obligations in this connection in providing a wide range of advisory services to the government through a major advisory committee and a number of technical committees.

*Position of the Board and Council on Medical Service.* The Board of Trustees is grateful to the Council on Medical Service for conducting extensive studies into the various aspects of P.L. 89-97. The Board and council have observed the following with reference to the program:

(a) Medicare will dramatically affect the practice of medicine in Mississippi and the United States.

(b) Medicare will be an extensive program in Mississippi with or without the cooperation, interest, and participation of the state medical association.

(c) The Mississippi State Medical Association has both a duty and an obligation to its members who will participate in Medicare and to its members who will not participate to employ its full resources and capacities to see that the legal and ethical intentions of each group are represented to the best of the association's abilities.

(d) In order to have a voice in the operation of the program, it is imperative that our association assume a position of leadership in all aspects of its implementation and operation.

*Part 1-B Administration.* The Board of Trustees is well aware and accordingly emphasizes to this House of Delegates that the manner in which Part 1-B is administered is of the highest importance to practicing physicians and to those whom they serve under the program. The carrier will be invested with stated jurisdictional authorities as to (1) determination of "reasonableness"



of fees, (2) physician involvement in claims review and adjudication, (3) utilization review, and (4) claims payment.

Appointment of an external organization to serve in this capacity could superimpose a duplicate structure over our existing professional mechanisms, as have been successful in the operation of the Dependents' Medical Care Program for nine years, over our grievance committee system, and even over our individual hospital staff committee structures. Such an external organization would be lacking in the wide range of professional relationships inherent in our association, in communications channels to practicing physicians, and in liaison with physicians as regards matters of professional interest.

It is obvious that an external carrier, regardless of worthy motivation and laudable intent, would not and could not be fully and inherently oriented to the policies of our association.

Both the Board of Trustees and the Council on Medical Service, joined in the view by the principal general officers, believe that the choice is this: Either we place ourselves in our own hands in this regard or give this task to a commercial entity or even to an agency of government.

*Recommendation.* The Board of Trustees, therefore, recommends that the association qualify as fiscal intermediary for the administration of Part 1-B in Mississippi to represent practicing physicians in the conduct of the voluntary insurance program under P.L. 89-97. The Board is aware that there has been no policy action in opposition to this recommendation. The Board has carefully considered the action tabling a similar recommendation at the 97th Annual Session, but such tabling action has not been interpreted as other than a cessation of discussion upon the issue at the annual session. Respecting the prerogatives of the House of Delegates, the Board made the decision to call the present Special Session, to present full facts, to invite full discussion, and to bring this recommendation before the House.

*Certifying Agency.* P.L. 89-97 provides in Section 1864 that the Secretary of Health, Education, and Welfare shall make an agreement with the state health (Board of Health) agency in any state able and willing to do so for the performance of three functions:

(a) Certify which institutions in the state are a hospital or an extended care facility (nursing home) and may be treated as such by the Secretary for purposes of making payments under Part 1-A.

(b) Provide consultative services to assist such institutions in establishing utilization review mechanisms.

(c) Provide consultative services to assist generally in their participation in the hospital care program.

The Board considered this section and was informed at its August 18-19, 1965, meeting that the Secretary had written the Governor of each state inviting him to make such a designation. Recognizing that the Mississippi State Board of Health alone possesses the qualifications to undertake these tasks and recognizing that such tasks should only be undertaken by a medically oriented state agency, the Board of Trustees voted to request the Governor of Mississippi to designate the State Board of Health as the certifying agency under Section 1864.

On August 30, the President of the association, accompanied by other officers, delivered a written recommendation in this connection to the Governor. To date, no action has been taken. As of December 14, 1965, the Governors of 49 states, the Commissioners of the District of Columbia, and the Governors of all but one of the United States territories had designated the state or territorial health agency as the certifying agency for the purposes stated above. Only Mississippi and American Samoa remained without a state health certifying agency. The Board of Trustees reaffirms its recommendation that the Governor of Mississippi designate the State Board of Health as the certifying agency for hospitals and extended care facilities.

#### REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

There is ample evidence in the Report of the Board that our executive and governing body has devoted itself to the challenging issues before us. The policy background, as well as the conclusions reached by the Board and the consultations with the Council on Medical Service, demonstrates clearly the alternatives before us.

The Board's studies also show the importance to the practice of medicine in Mississippi of the organization which will serve as carrier and fiscal intermediary for Part 1-B, the voluntary insurance aspect of the law, especially as relates to (1) determination of reasonableness of fees, (2) physician involvement in claims review and payment, (3) utilization review, which your committee feels should be conducted by physicians as is done in the operation of tissue committees and medical audit committees, and (4) the many other func-

## HOUSE OF DELEGATES / Continued

tions which demand the fullest possible medical orientation and communication with the practicing profession.

Your reference committee emphasizes that no physician is obligated, either statutorily or morally or ethically, to furnish his services through Part 1-B unless he freely desires to do so. For those who are willing to furnish professional services under the program, the option is open to submit claims or statements of charges to the fiscal intermediary or to bill the patient directly, furnishing a receipted bill after payment. It is apparent both from the record and discussion before your committee that our association possesses the qualifications and resources to serve those physicians of Mississippi who will care for patients under Part 1-B with effectiveness. Your reference committee therefore approves the recommendation of the Board of Trustees that the association seek to qualify as fiscal intermediary for the voluntary supplementary insurance plan under Public Law 89-97.

Your reference committee recommends that the Board of Trustees consider organization of a separate department of our headquarters for the administration of fiscal intermediary activities.

In approving the Report of the Board of Trustees, we ask all members to associate themselves in your reference committee's commendation of our Board and general officers.

The report of the reference committee was adopted.

### RESOLUTION NO. 1, PUBLIC LAW 89-97

*Dr. G. Swink Hicks:* WHEREAS, Public Law 89-97, popularly known as Medicare, was signed into law on July 30, 1965, and

WHEREAS, Approximately 210,000 Mississippians or one out of seven persons in our state will be eligible for hospital and medical benefits provided by parts 1-A and 1-B of Public Law 89-97, and

WHEREAS, Our Mississippi State Medical Association should provide constructive leadership in the administration of Public Law 89-97 so that the best interests of the patients we serve and our profession may be represented, and

WHEREAS, Under Part 1-B of Public Law 89-97 our Mississippi State Medical Association has the opportunity to qualify as "carrier" for physician services in Mississippi, and

WHEREAS, A "carrier" among other things will represent the views of the medical profession in

Mississippi on utilization review and fees for service, now, therefore, be it

*Resolved,* That our Mississippi State Medical Association qualify as "carrier" for physician services under Part 1-B of Public Law 89-97.

### RESOLUTION NO. 2, PUBLIC LAW 89-97

*Dr. Guy T. Vise:* WHEREAS, Public Law 89-97 will have a great influence on the practice of medicine in the United States, and

WHEREAS, All physicians in Mississippi will be affected by Public Law 89-97 whether they provide services to beneficiaries of the law or not, and

WHEREAS, Our Mississippi State Medical Association should actively represent the best interests of all physicians in the state and the patients they serve, now, therefore, be it

*Resolved,* That the Mississippi State Medical Association through its elected councils and committees continually study all aspects of Public Law 89-97 and report to the membership in this regard and be it further

*Resolved,* That the Mississippi State Medical Association apply as carrier for physician services under Part 1-B of Public Law 89-97 and actively represent the profession in all other aspects of Public Law 89-97 as it is administered in Mississippi.

### RESOLUTION NO. 3, THE ADMINISTRATION OF MEDICARE IN MISSISSIPPI

*Dr. Stanley A. Hill:* WHEREAS, Public Law 89-97, the Social Security Amendments of 1965, was adopted by the House of Representatives on April 8, 1965, adopted by the Senate on July 7, 1965, and signed into law on July 30, 1965, and

WHEREAS, Forty-nine states have designated their respective state boards of health as certifying agencies for hospitals and nursing homes, and

WHEREAS, It is desirable to have the best adaptable agency for the certifying function and fiscal arrangement to favor efficiency, and

WHEREAS, the Northeast Mississippi Medical Society has acted unanimously to indicate its views in this connection, now, therefore, be it

*Resolved,* That the Mississippi State Medical Association recommends that the Mississippi State Board of Health be designated as the certifying agency for hospitals and nursing homes and that the Governor of Mississippi be respectfully requested to make such designation, and be it further

*Resolved,* That the Mississippi State Medical Association become the fiscal intermediary and that it seek this appointment by formal application



to the Department of Health, Education, and Welfare.

REPORT OF THE REFERENCE COMMITTEE  
ON REPORTS OF OFFICERS AND  
BOARD OF TRUSTEES

These resolutions, sponsored by three component medical societies of the association, urge that the Mississippi State Medical Association qualify as carrier or fiscal intermediary for Part 1-B of Public Law 89-97. They were considered conjointly and having the same intent and purpose as the recommendation of the Report of the Board of Trustees, your committee reiterates its approval.

We recommend adoption of Resolutions Nos. 1, 2, and 3.

The report of the reference committee was adopted.

OFFICIAL ATTENDANCE

The Reference Committee on Credentials recorded the registration and seating of 82 members of the House of Delegates, among whom there were 45 delegates selected by their respective component medical societies on a basis of apportionment and 37 delegates who are members of the House by reason of holding elected office in the association.

The official totals by component medical society are as follows:

Society	County Delegates	Officers, Council	Total
Amite-Wilkinson	1	0	1
Central	7	12	19
Claiborne	1	0	1
Clarksdale Six	0	0	0
Coast Counties	2	2	4
Delta	2	6	8
DeSoto	0	0	0
East Mississippi	4	1	5
Homochitto Valley	0	1	1
North Central	3	3	6
Northeast Mississippi	7	4	11
North Mississippi	1	1	2
Pearl River	0	0	0
South Mississippi	11	5	16
South Central	5	1	6
West Mississippi	1	1	2
Totals	45	37	82

CLOSING CEREMONIES

On behalf of all members of the House of Delegates, the Vice Speaker, Dr. Lotterhos, expressed appreciation to the headquarters hotel, to the General Officers and Board of Trustees, and to the executive staff for arrangements in connection with the special session. He thanked the reference committees for their service and assistance. After making closing remarks and an expression of appreciation, the Speaker, Dr. Nelson, returned the gavel to the President, Dr. Crawford.

There being no further business, the House of Delegates was adjourned *sine die* at 3:45 o'clock in the afternoon, December 16, 1965.

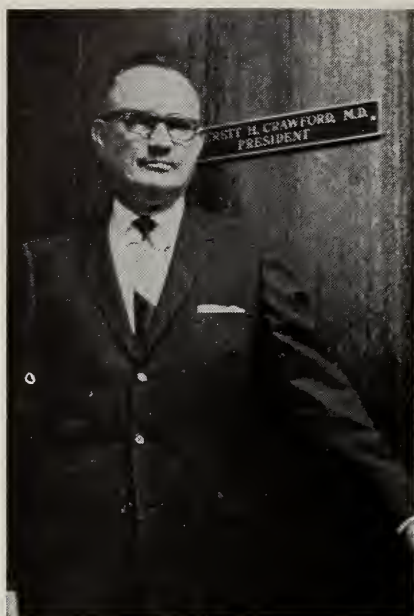
NO MOUSE, NO CLOCK

Once a week on the evening before his day off, the physician treated himself to a special concoction at his favorite bistro, an exotic daiquiri made with crushed almonds.

On one such occasion, the bartender suddenly realized that he had no almonds on hand as the doctor came in. Hurriedly, the bartender crushed the only nuts available—hickory nuts—and prepared the usual drink with the substitute ingredient.

After a taste, the physician reacted sharply: "What kind of drink is this?"

"Oh," responded the bartender, "that's a hickory daiquiri, Doc!"



# The President Speaking

## 'Who Will Decide?'

EVERETT CRAWFORD, M.D.

Tylertown, Mississippi

MORE THAN 181,000 MISSISSIPPIANS—almost one out of 10—receive some form of public assistance under the four existing welfare categories. Except for food commodities, social services, and a token vendor medical program, benefits are limited to minimal cash payments. To maintain these services, the Department of Public Welfare requires a biennial budget of about \$140 million of which more than \$109 million is in federal grants.

Our state is faced with a major decision on the direction and scope of these programs. The challenge is made all the more imperative by the deadline imposed upon the states with reference to federal grants under Title XIX of Public Law 89-97. This section of the Medicare law extends the Kerr-Mills principle to all age brackets under the four welfare categories, i.e., Old Age Assistance, Assistance to the Permanently and Totally Disabled, Aid to the Blind, and Aid to Dependent Children and their families. To qualify for increased federal grants under this title, a state must implement vendor medical programs under each category by or before 1970 or forfeit all such grants.

In fragmenting our programs of medical care for the indigent by scattering them among a host of state agencies, we Mississippians have spread ourselves so thin that nobody can taste the butter. At present, substantial appropriations are being channeled into state health and medical programs which secure no federal grants. The inevitable consequence will be a diminution in the quality and quantity of medical services which can be offered as costs continue to rise. We urgently need a sweeping revision of these fragmented, thinly spread programs.

Our association will stand ready to assist our state in making a realistic decision over the future of care programs for the indigent and near-needy. Let none be deluded: If we do not make the decision, it will surely be made for us. It is only a question of who will decide.

★★★





## The Hart Bill: A Myopic View of Medical Practice

### I

A MEMBER of the United State Senate has set himself about the task of rewriting the *Principles of Medical Ethics*, and he says that his handiwork will impart "the force of law" to what he believes a physician should or should not do in serving the medical needs of a patient. However preposterous the proposal may appear, no physician should take it lightly, because Sen. Philip A. Hart (D., Mich.) has never been more serious in his life. He is fully dedicated to the goal of prohibiting every medical practitioner from dispensing any drug or device in the course of rendering professional services.

The chief targets of Sen. Hart's bill, S. 2568, now pending before the Senate Subcommittee on Antitrust and Monopoly, are ophthalmologists who dispense eyeglasses. But to a very real extent, the measure, if enacted, would apply to every physician in the United States. The terse, three page bill minces no words in spelling out that "it shall be unlawful for any licensee (physician) to accept or receive directly or indirectly from any person any profit on or resulting from the sale, rental, furnishing, or supplying by such licensee of any drug or device to such person in connection with or as a result of the rendition by such licensee of professional service to or for such person . . ."

And there are only two exceptions to the sweeping prohibition: Medical emergencies which, incidentally, are not defined in the bill and the administration of a "unit dose" of a drug in the course of care. The measure applies exclusively to the practice of medicine, notwithstanding the cold facts that most eyeglasses and nearly all drugs are not sold or supplied to patients by doctors of medicine.

All of which points up clearly that Sen. Hart's motives are showing.

### II

During August 1965, the senator's subcommittee conducted hearings on how and where the public secures eyeglasses. Based upon testimony of a few witnesses—mostly opticians and a handful of ophthalmologists who said that they did not dispense—the subcommittee concluded that the eyeglasses-buying public was being fleeced, that dispensing ophthalmologists frequently furnished an inferior product, and that opticians were being forced into bankruptcy.

Said Sen. Hart: "By interfering with—and sometimes denying—a patient's right to take his prescription (for eyeglasses) and shop for the best style, quality, and price, a doctor dispensing

## EDITORIALS / Continued

his own wares not only takes advantage of that patient but also interferes seriously with the competitive opportunity of other sellers of optical goods. The result is to restrain trade. Competition is lessened and competitors are injured. We have learned of opticians forced into bankruptcy—of one who lost 40 per cent of his business in the year after doctor-dispensing began in his city—and of many others similarly damaged.”

The senator hardly exercised any effort to conceal his enmity for the medical profession, because the hearing record is replete with such un-senatorial expressions as “doctor merchants” and “mercantile doctors.”

It is curious, indeed, that the subcommittee found no fault with optometrists who prescribe and dispense most of the eyeglasses purchased each year. Since lenses furnished to a patient have no intrinsic value *per se* but serve only as means of correcting an eye condition which has been diagnosed, then it would be as logical—or illogical within the prejudiced context of the bill—to prohibit a dentist from furnishing his patient with dentures.

As written, S. 2568 would prohibit an orthopaedic surgeon from supplying a physical appliance. An extreme construction of the bill would make it unlawful for a gynecologist to supply his patient a pessary, although it is somewhat puzzling as to what nonmedical source the gynecologic patient might be referred for such a fitting.

### III

Apart from its obvious purpose to impose punitive restrictions upon the practice of medicine, Sen. Hart's measure either overlooks or patently ignores the nature and objective of ethical physician dispensing. In the first place, every doctor of medicine—be he ophthalmologist, general practitioner, or of whatever discipline—is ethically and legally obligated to serve the best medical interests of his patients. To circumscribe in any manner this fundamental obligation or to impose upon the physician terms, conditions, and restrictions which impede his fulfilling these obligations is nothing more or less than trifling with the health and well-being of all Americans.

To achieve these questionable ends through legislation based solely on economic considerations and to conclude concomitantly that even some physician-provided eyeglasses are “inferior” on the totally insufficient evidence from the August hearings are, unto themselves, contradictions of astonishing magnitude.

But there's more: In no sense can or does any federal law relieve the physician from full responsibility for all of his treatment and care. It therefore follows that removal from the control of the doctor of any means through which his treatment is accomplished is to create an environment of professional circumstance which is neither just nor reasonable.

### IV

The National Medical Foundation for Eye Care conducted an interesting study in which some pertinent and interesting findings were made:

—41 per cent of the ophthalmologists are located in cities of more than 100,000 population, 16 per cent are in cities of about 100,000, and the remaining 43 per cent are in cities ranging from 5,000 to 50,000 population.

—16 per cent of the ophthalmologists reported no optical establishment in their respective communities, and another 10 per cent reported none in their neighborhoods.

—59 per cent of the ophthalmologists reported that they delegated both the supply and fitting of glasses to individuals not in their employ.

—41 per cent of the eye physicians said that they prescribed, supplied, fitted, and inspected some or all of their patients' eyeglasses in their respective offices.

With the recognition of the fact that ophthalmologists actually prescribe a minority of all eyeglasses purchased, the study findings can hardly suggest a monopoly as alleged by Sen. Hart.



“I wet the bed.”





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Moreover, it is difficult to understand how ophthalmologists could possibly create and maintain a monopoly, even if they earnestly desired to do so.

*Post facto* to their testifying in a manner most pleasing to Sen. Hart last August, the Guild of Prescription Opticians of America issued a policy statement in late November which appeared to temper—if not to retrench—their previous hard-nosed position. In part, the statement said:

“We recognize that it is in the patient’s best interest if an ophthalmologist dispenses eyeglasses in a community where adequate independent optical services are not available or cannot be procured . . .”

Despite the patronizing overtone, the statement does moderate prior accusations and innuendos tossed at the medical profession, making it appear that the opticians are having some second thoughts.

The Hart bill further ignores patient convenience, quality control, and the existing competitive climate in physician-dispensing of eyeglasses. And almost any ophthalmologist will tell you that when optician-supplied spectacles are unsatisfactory, the patient usually comes back—you guessed it—to the ophthalmologist.

The short-sighted bill by Sen. Hart is myopic class legislation which an enlightened public isn’t likely to tolerate.—R.B.K.

## Medicine Moves Closer to Life Secrets

The biggest medical news stories of 1965 underscore the fact that science is getting closer to the secrets of life itself. Nobody can yet answer the question of what life is, but medical scientists last year put together a synthetically-produced model of a nucleic acid, one of the lowest common denominators of the life process, and saw it reproduce itself in a test tube.

Other major medical achievements in the mid-60’s included:

—The first determination of the complete chemical structure of a nucleic acid.

—Cultivation of the leprosy bacillus in tissue culture for the first time, an advance that can mean much for investigators endeavoring to develop chemotherapeutic agents with which to prevent or combat the disease.

—The apparent implication of a virus or other cancer-causing agent in leukemia among several members of the same family. Although viruses have been implicated in certain animal leukemias, their role in the human form has never been clear.

—Formal opening of a unique research facility, the AMA’s Institute for Biomedical Research, supported by AMA-ERF. Dedicated to basic scientific investigation into life processes, its investigators look for new questions rather than answers to problems which have already been defined.

—Initiation of a major campaign by the American Medical Association and the 54 state and territorial medical associations against resurging venereal disease, the nation’s most urgent communicable disease problem.

Perhaps these scientific achievements may be something less than sensational to the practical, busy clinician. They may be just so much gobbledegook to John Q. Public. But the significance of a given accomplishment in medical investigation can rarely be judged on ultimate value as a single entity. When medical science forges another link in the chain of knowledge which will wear and hold with the addition of still more links, then medicine pushes farther along in the ceaseless journey toward victory over disease.—W.M.D.

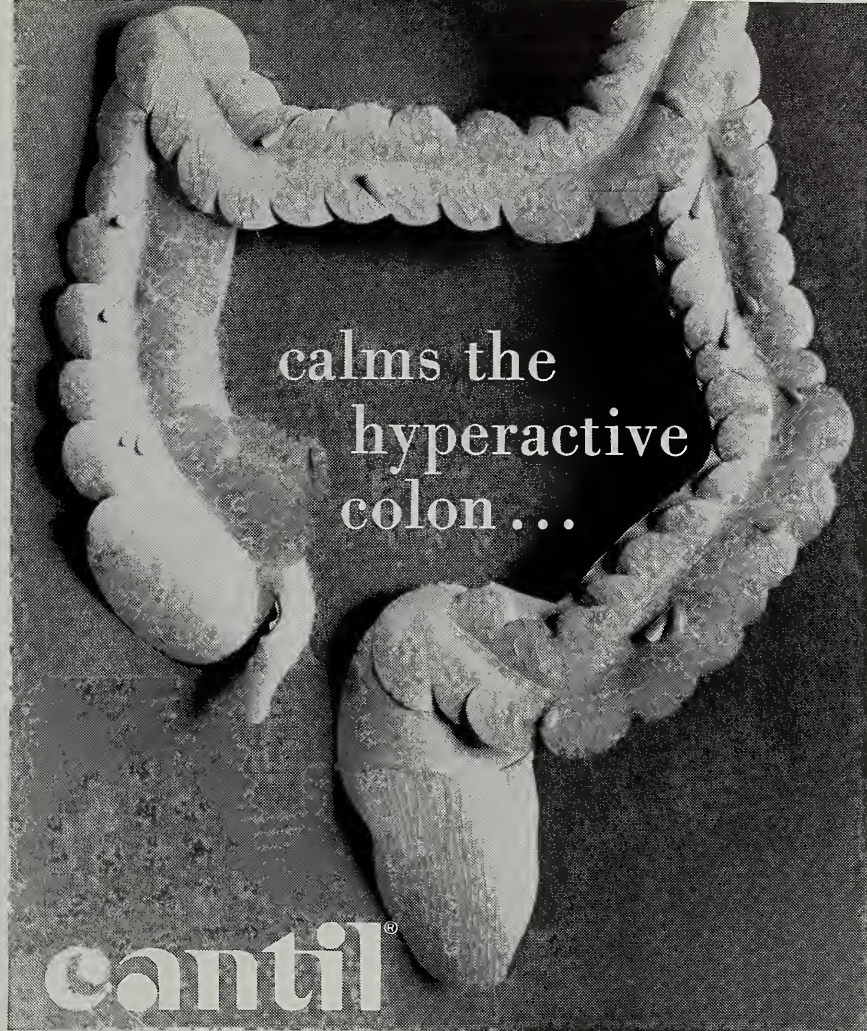
## Accardo’s Ace

In neighboring Louisiana where chiropractors have been denied the badge of legality and the sanction of the state, a political pot is beginning to boil over this most virulent form of cultism. In December of 1965, the New Orleans Board of Health sought unsuccessfully to secure authorization from the city council to file a civil suit to prohibit chiropractors from plying their trade in the Crescent City.

Dr. Nick J. Accardo, chairman of the city board of health, expressed distress in behalf of the scientific medical community and the citizens, calling Mayor Victor H. Schiro and the councilmen “modern day Pontius Pilates who would rather wash their hands . . . turn their eyes away, muffle their ears, and pretend nothing is wrong.”

The board chairman said that “our city and state are now the target of a politically oriented and well organized fanatical cult which not only misrepresent themselves as physicians but even as chiropractors. They are nothing more than frauds. They not only drain the wealth, but seriously infect the health of innocent victims of their prey. Tolerating these illegitimate practitioners pro-





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"In 40 of 44 cases of irritable or spastic colon, Cantil [mepenzolate bromide] or Cantil with Phenobarbital reduced or abolished abdominal pain, diarrhea and distention and promoted restoration of normal bowel function . . . Cantil [mepenzolate bromide] proved to be singularly free of anticholinergic side-effects. Blurring of vision or dryness of the mouth were occasionally seen and were usually managed with a reduction in dosage. Urinary retention, noted in two cases was eliminated in one by reducing dosage."<sup>1</sup>

### **IN BRIEF:**

One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

Supplied: CANTIL (mepenzolate bromide)—25 mg. per scored tablet. Bottles of 100 and 250.

CANTIL with PHENOBARBITAL—containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

1-Riese, J.A.: Amer. J. Gastroent. 28:541 (Nov.) 1957



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## EDITORIALS / Continued

notes a cynicism among the entire law-abiding population."

But the mayor's rebuff hasn't stopped the city board of health from instituting action. On December 30, Dr. Accardo served formal warnings on 31 New Orleans spine punchers that they will be charged in municipal court if they do not obtain massage parlor licenses. It seems that anybody who rubs anybody else in New Orleans for a consideration is in the massage parlor business, and Dr. Accardo has thus played an ace.

Hats off to the New Orleans City Board of Health and, incidentally, to the respected *Times Picayune* which reported the entire sordid affair with objectivity and clarity, never once referring to the 31 cultists whom it named as "doctor!"—R.B.K.



The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

**BOWLUS, WILLIAM EDWARD**, Jackson. Born Brookhaven, Miss., March 23, 1931; M.D., University of Mississippi School of Medicine, Jackson, 1959; interned University of Mississippi School of Medicine, Jackson, one year; internal medicine residency, University of Mississippi School of Medicine, Jackson, two years; neurology residency, University of Mississippi School of Medicine, Jackson, two years; psychiatry residency, University of Mississippi School of Medicine, Jackson, one year; elected Nov. 2, 1965, by Central Medical Society.

**HENDERSON, WILLIAM HOLLENSWORTH**, Oxford. Born Little Rock, Ark., Aug. 1, 1937; M.D., University of Arkansas School of Medicine, Little Rock, 1961; interned Baptist Memorial Hospital, Memphis, Tenn., one year; residency, University of Tennessee College of Medicine, Memphis, one year; residency, Baptist Memorial Hospital, Memphis, Tenn., two years; member, American College of Ob-Gyn and the American Society for the Study of Sterility; elected Oct. 8, 1965, by North Mississippi Medical Society.

**MASTERSON, CHESTER WARREN**, Batesville. Born Marks, Miss., Feb. 26, 1933; M.D., University of Tennessee College of Medicine, Memphis, 1960; interned Baptist Memorial Hospital, Memphis, Tenn., one year; general surgery residency, Kennedy VA Hospital, Memphis, Tenn.; otolaryngology residency, EENT Hospital, New Orleans, La.; elected Oct. 8, 1965, by North Mississippi Medical Society.

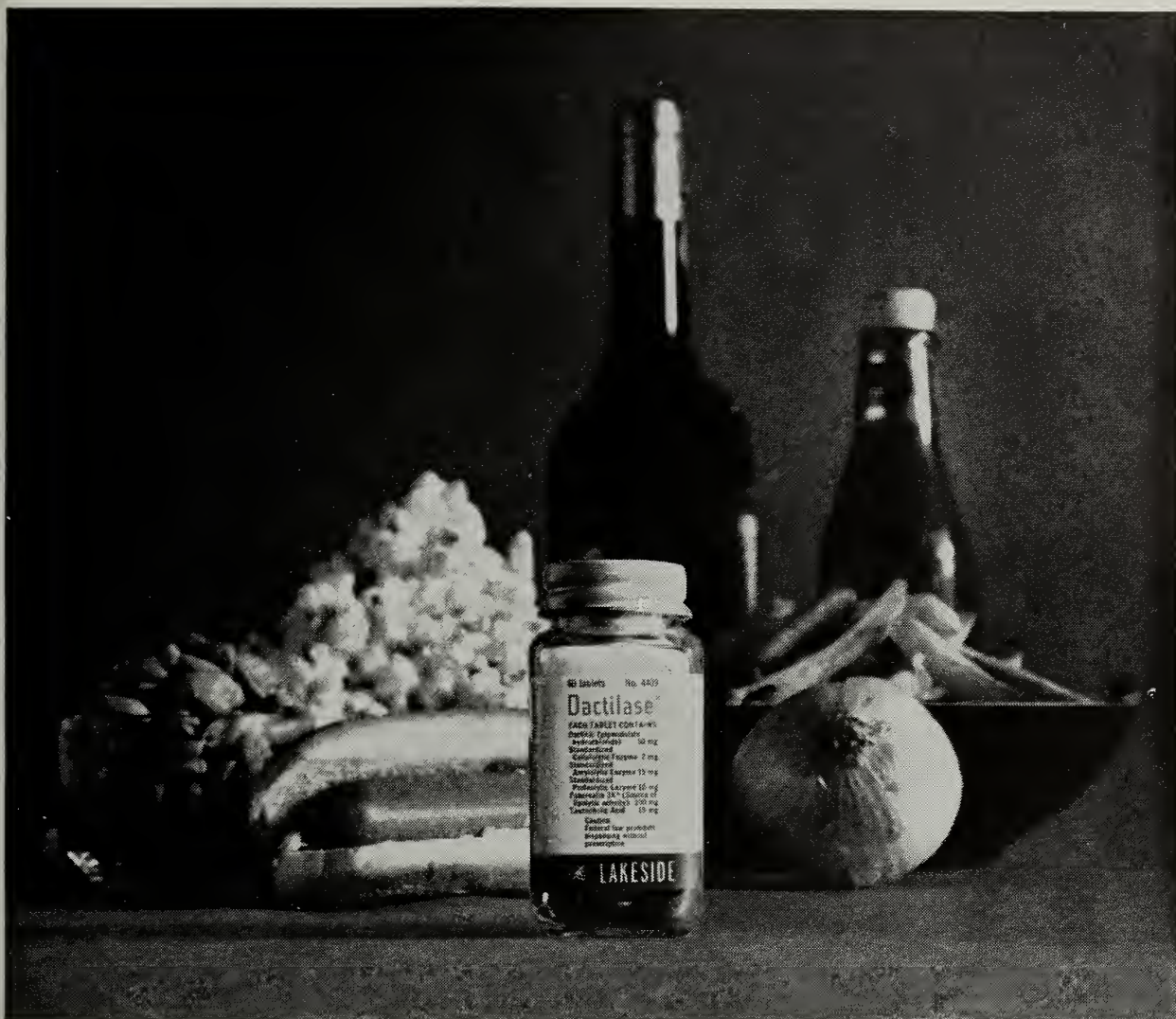
**MCPHERSON, HERBERT ALLEN, JR.**, Columbus. Born Brownsville, Tenn., June 11, 1926; M.D., Louisiana State University School of Medicine, New Orleans, 1956; interned University of Tennessee Memorial Research Center and Hospital, Knoxville, one year; ob-gyn residency, University of Tennessee Memorial Research Center and Hospital, Knoxville, three years; elected March 9, 1965, by Northeast Mississippi Medical Society.

**TAYLOR, WALTER TRAVIS**, Clarksdale. Born Como, Miss., Feb. 13, 1930; M.D., University of Mississippi School of Medicine, Jackson, 1960; interned Memorial Hospital of Chatham County, Savannah, Ga., one year; internal medicine residency, Memorial Hospital of Chatham County, Savannah, Ga., two years; internal medicine residency, Ochsner Foundation Hospital, New Orleans, La., one year; cardiology residency, Ochsner Foundation Hospital, New Orleans, La., one year; elected Nov. 3, 1965, by Clarksdale & Six Counties Medical Society.

**WEEMS, WILLIAM LAMAR**, Jackson. Born Jackson, Miss., March 10, 1932; M.D., Baylor University College of Medicine, Houston, Tex., 1956; interned Confederate Memorial Medical Center, Shreveport, La., one year; general surgery residency, University of Mississippi School of Medicine, Jackson; urology residency, University of Mississippi School of Medicine, Jackson; urology residency, Massachusetts General Hospital, Boston; captain, U. S. Air Force, two years; elected Nov. 2, 1965, by Central Medical Society.

**WEGENER, GLENN LEE**, Clarksdale. Born Covington, Ky., June 7, 1928; M.D., Tulane University School of Medicine, New Orleans, La., 1956; interned Charity Hospital of Louisiana, New Orleans; residency, Tulane Division of Ob-Gyn at Charity Hospital, La., three years; elected Nov. 3, 1965, by Clarksdale & Six Counties Medical Society.





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Dactilase provides comprehensive therapy for a wide range of digestive disorders. Its antispasmodic and anesthetic actions rapidly relieve pain and spasm. Dactilase decreases hypermotility without inducing stasis. In addition, it supplies digestive enzymes to help reduce bloating, belching and flatulence. Dactilase does not interfere with normal digestive secretions. Very often it can be a most useful answer to the dyspeptic's needs.

**DACTILASE:** Each tablet contains: Dactil® (piperidolate hydrochloride), 50 mg.; Standardized cellulolytic\* enzyme, 2 mg.; Standardized amylolytic enzyme, 15 mg.; Standardized proteolytic enzyme, 10 mg.; Pancreatin 3X\*\* (source of lipolytic activity), 100 mg.; Taurocholic acid, 15 mg.

\*Need in human nutrition not established. \*\*As acid resistant granules equivalent in activity to 300 mg. Pancreatin N.F.

**Side Effects and Contraindications:** DACTILASE is almost entirely free of side effects. However, it should be withheld in glaucoma and in jaundice due to complete biliary obstruction.

**Administration and Dosage:** One tablet with, or immediately following each meal. Tablets should be swallowed whole.

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## PERSONALS

BEN F. BANAHAN, JR., of Jackson has been named medical representative for the Hinds County Heart Association.

CHARLES W. CAMPBELL of Lexington has been elected president of the North Central District Medical Society. WILLIAM B. HUNT of Grenada is secretary of the society.

ROBERT F. CARTER, JR., of Biloxi has been elected president of the Howard Memorial Hospital medical staff. Serving with him are WILLIAM F. EVERETT of Biloxi, chief of staff; JAMES S. FISACKERLY of Biloxi, vice president; and ROBERT H. MIDDLETON, JR., of Biloxi, secretary-treasurer.

DEWITT HAMRICK of Corinth has been inaugurated president of the Northeast Mississippi Medical Society.

EDLEY H. JONES of Vicksburg was principal speaker on the occasion of the installation of a new chapter of Sigma Alpha Epsilon at the University of Southern Mississippi.

DANIEL H. MOORE, JR., of Meridian has been certified as a diplomate of the American Board of Ophthalmology. He received his M.D. at Harvard University School of Medicine, interned at the University Medical Center at Jackson, and received his residency training at Harvard and the Cincinnati Medical Center.

WALTER R. NEILL of Jackson has retired as commodore of the Jackson Yacht Club. The club has facilities at the Ross R. Barnett Reservoir north of the city.

HOWARD A. NELSON of Greenwood was elected to a two year term as a director of the Greenwood Chamber of Commerce. He served last year as the first physician-president of the chamber in its 40 years of service to the community.

E. E. ROBINSON, JR., of Meridian has been named vice president of the Choctaw Area Council of the

Boy Scouts of America. The council supervises activities of 123 troops in a six county area with 98 sponsoring institutions and more than 2,800 Boy Scouts.

JAMES T. THOMPSON of Moss Point has been elected a trustee of William Carey College. Continuing to serve as a trustee of the college is EARL W. GREEN of Hattiesburg.


H. M. WADSWORTH, SR., of Hernando has been inaugurated president of the DeSoto County Medical Society. Other principal officers for 1966 are BILLY B. HOOVER of Olive Branch, vice president, and MALCOLM D. BAXTER, JR., of Hernando, secretary.


ROYAL W. WILLIAMS of Greenville has announced his retirement as director of the Washington County Health Department effective Feb. 16, the occasion of his 70th birthday. Dr. Williams has served in this capacity since 1954.

FRANK A. WOOD of Jackson has been named president of the Hinds County Unit of the American Cancer Society. Dr. Wood is chairman of the state medical association's Committee on Cancer Control.



## DEATHS

 GRAY, WALTER PETWAY, Waynesboro. M.D., Tulane University School of Medicine, New Orleans, La., 1905; emeritus member of MSMA and member of the Fifty Year Club; died Dec. 10, 1965, aged 86.

 MAGEE, LOUIS McNAIR, Gulfport. M.D., Tulane University School of Medicine, New Orleans, La., 1928; internship, Touro Infirmary, New Orleans, La., one year; died Dec. 8, 1965, aged 62.

ROUSE, LOUIS CALVIN, Poplarville. M.D., Atlanta College of Physicians and Surgeons, Ga., 1902; member, Southern Medical Association and the College of Physicians and Surgeons; died Dec. 4, 1965, aged 83.



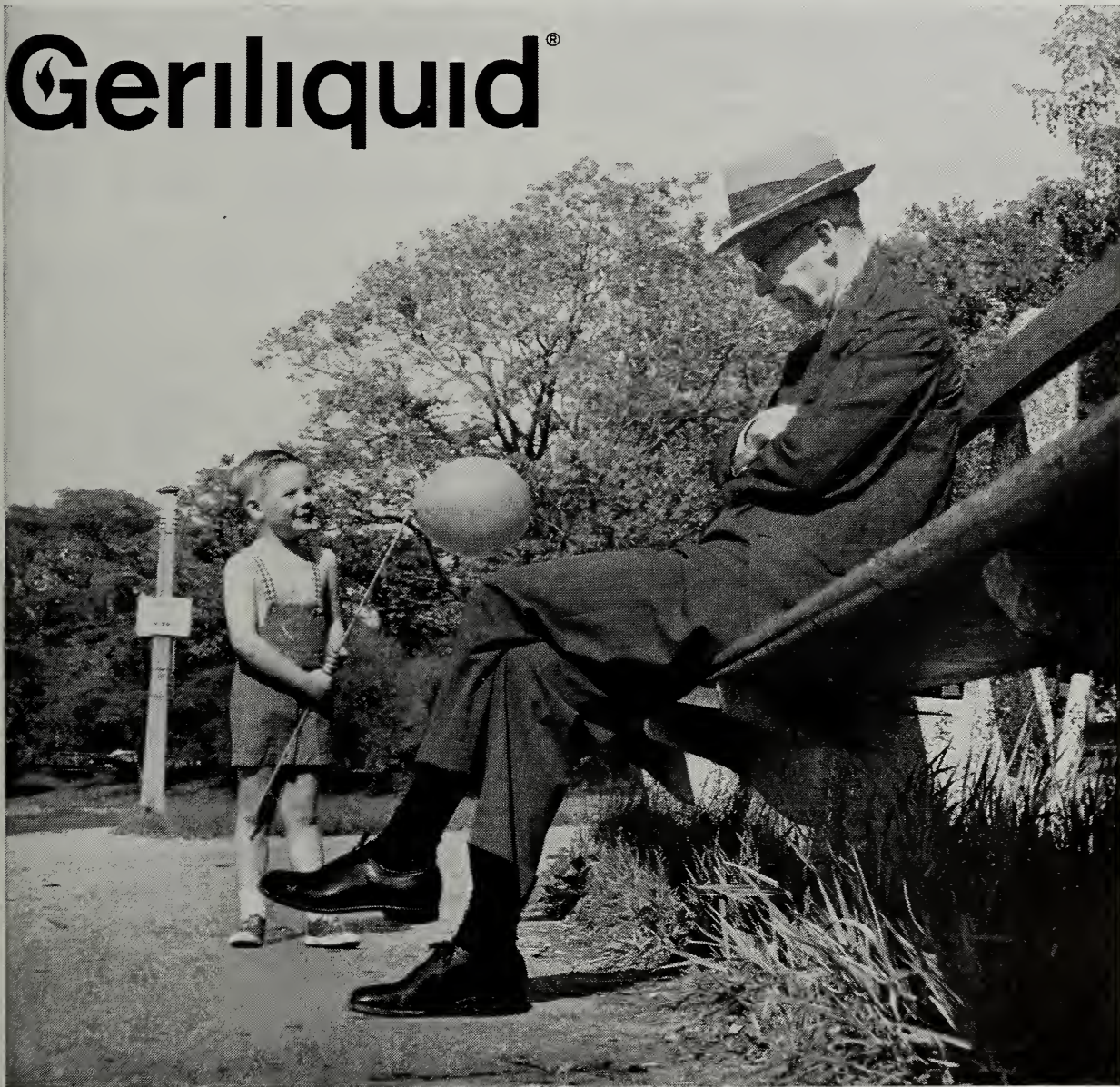
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dizziness and faintness in patients with impaired peripheral circulation

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impaired peripheral circulation, GERILIQUID increases the ability to walk farther with less pain. Patients particularly like the palatable, sherry wine base.

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


**IN BRIEF: Composition:** Each 5 ml. contains: niacin 75 mg. and aminoacetic acid (glycine) 750 mg. in a palatable sherry wine base; alcohol 5%.

**Side Effects:** Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is concomitant administration of a coronary vasodilator.

**Administration and Dosage:** One or two teaspoonfuls 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation.

**Supplied:** Bottles of 8 oz. and 16 oz.

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## Book Reviews

**Management of Juvenile Diabetes Mellitus.** By Howard S. Traisman, M.D., Assistant Professor of Pediatrics, Northwestern Medical School; Associate Attending Physician and head of the Diabetes Clinic, Children's Memorial Hospital, Chicago, Ill. and Alvah L. Newcomb, M.D., Associate Professor of Pediatrics, Northwestern University Medical School; Associate Attending Physician, Children's Memorial Hospital, Chicago, Ill. 147 pages with illustrations. St. Louis: C. V. Mosby Company, 1965. \$12.75.

This is a well-written and unusually complete manual on juvenile diabetes mellitus. The authors apparently have had a great deal of experience, both in the teaching of this subject, and in the management of children with this condition.

The book has 11 chapters, and includes the epidemiology, heredity, the diagnosis and treatment of diabetes mellitus in children, diabetic acidosis and six hour management, description of all types of insulin, including several new products; clear and easily understood instructions for patients and parents; an explanation of dietary treatment, with typical diets for every age and weight in childhood; a discussion of the infant diabetic. In addition there is a very good and practical section on fluid and electrolyte therapy for infants and children.

The authors adhere to a rigid system of carefully weighed diets in which as they state, "He must eat the weighed, prescribed diet at the same time each day." They admit that there are other diets, as prescribed by the American Dietetic Association, and that there are the Free Diets, but they do not recommend them. They believe that the free diet predisposes to excessive glycosuria and ultimately poor diabetic control. They say that the American Dietetic Association diets are not quantitatively constructed and that the protein allowance is low.

The general practitioner and pediatrician could well use this book for the management of the children that they encounter with diabetes. It should also be an excellent teaching and reference man-

ual for medical students, interns, student and graduate nurses, and as a manual for the parents of diabetic children.

VAN C. TEMPLE, M.D.

**Neuro-Ophthalmology: Symposium of the University of Miami and the Bascom Palmer Eye Institute.** By J. Lawton Smith, M.D., Associate Professor of Ophthalmology, University of Miami School of Medicine, Miami, Florida. 268 pages with illustrations. St. Louis: C. V. Mosby Company, 1965. \$21.75.

The purpose of this volume is to compile the most recent research findings in neuro-ophthalmology of clinical interest. Dr. Smith has done this most effectively with the contributions of 16 leading ophthalmologists and neurologists.

Among the subjects covered are: seronegative syphilis, hereditary degeneration of the retina, angiography of the ocular fundus, neurology of the orbicularis oculi, the phakomatoses and the neuro-ophthalmology of occlusive vascular disease.

The vascular diseases are particularly well covered and rightly so with the rising incidence of cerebrovascular disease.

With the developments in neuro-ophthalmology changing so rapidly, I find this volume very useful in bringing the latest research findings of clinical value to the busy ophthalmologist.

WENDELL B. HOLMES, M.D.

**Cardiac Arrest and Resuscitation.** By Hugh E. Stephenson, Jr., M.D., Professor of Surgery, University of Missouri School of Medicine, Columbia, Missouri. 501 pages with illustrations. St. Louis: C. V. Mosby Company, 1964. \$15.00.

This comprehensive and illuminating volume had its origin some 16 years ago when the author, a surgical house officer, became fascinated by the problem of untimely cardiac failure. I had the personal pleasure of making his acquaintance 12 years ago when at Bellview Hospital he had activated a mobile cardiac resuscitation unit and was successfully accumulating the experiences of hundreds of surgeons over the country seeking the



# WHEN MOTHER'S IRON ISN'T UP TO MOTHERHOOD

**IN BRIEF: ACTIONS AND USES:** A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency anemia may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

**COMPOSITION:** Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. of elemental iron in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

**ADMINISTRATION AND DOSAGE:** Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

**SIDE EFFECTS:** Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache, and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

**PRECAUTIONS:** If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

**CONTRAINDICATIONS:** Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only, it is contraindicated in other anemias.

**CARCINOGENICITY POTENTIAL:** Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

**SUPPLIED:** 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

in iron deficiency anemia for rapid and predictable replacement of iron reserves

**imferon<sup>®</sup>**  
(iron dextran injection)



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explanations of causes and effectiveness of modes of treatment.

In this second edition of his 1958 text, the author seeks to evaluate and put in proper perspective newer techniques, suggestions and laboratory data relative to the broad area of cardiac arrest and resuscitation. For the physician likely to encounter the occasional patient requiring cardiac resuscitation, this book will provide basic factual information regarding cause and management.

The chapter on the "Mechanism of Cardiac Arrest" treats in great detail the relative roles of vagal stimulation, anoxia, hypoxia, potassium, and anesthetic agents as etiological agents for fibrillation and asystole.

"More patients lose their chance for total recovery during the crucial period between arrest and diagnosis than at any other time in the resuscitation period. The fear of an occasional mistaken diagnosis should not be a deterring influence on prompt immediate resuscitation measures. Since the period of reversibility is almost always present in cardiac arrest, it is tragic to allow this period to pass in following time-consuming diagnostic procedures such as searching frantically for a stethoscope or trying to obtain consultation from others. The patient's chance for survival rests with the personnel who are with the patient at the time of arrest." The author reviews valuable diagnostic details including physical phenomenon and the role of monitoring.

In a style reminiscent of British authors, developing his theme as interestingly as a novel, the author climaxes this book with his chapter on "Management of Cardiac Arrest," approaching it as a simple procedure as the physiology and pathology of the heart are properly understood. Cardiac arrest is always unexpected. Every physician should have a plan that he can put into immediate action for successful management revolves first and foremost about the importance of the time factor. If more than three to four minutes evolve after cessation of circulatory activity, efforts of resuscitation are doomed to failure.

Stephenson discusses the merits of all types of artificial respiration, mouth-to-mouth breathing, cricothyroid membrane puncture, tracheostomy and automatic pulmonary resuscitating units. He treats in minute detail the advantages of closed chest resuscitation and open chest massage and describes the proper management of ventricular fibrillation. He holds the reader's interest with

brief reviews of associated problems and experiences with therapeutic measures such as intra-arterial blood transfusion. He answers questions as "Should the operation be completed after cardiac arrest occurs?" "When should efforts at cardiac resuscitation be abandoned?" "Should cardiac resuscitation always be attempted?"

The role of drugs in cardiac resuscitation is fully covered. Defibrillators, pace makers and other electronic equipment are described.

Pitfalls, precautions, complications and medical legal aspects of this problem are discussed. Prognosis, cerebral anoxia and neurologic sequelae are reviewed.

The book summarizes a wealth of information and experience, a good portion of which would be of interest and value to any practicing physician. It would be of untold value to anyone who performs surgery and daily risks a hazard of this catastrophe.

RAYMOND S. MARTIN, JR., M.D.

## MPHA Names 1966 Officers

Newly elected officers of the Mississippi Public Health Association for 1966 were announced as the organization brought its annual meeting to a close at Jackson. Dr. Dominic Tumminello of Cleveland has been named president.

Other officers include Jack McMillan of Jackson, sanitation chairman; Mrs. Elizabeth Abel of Clarksdale, vital statistics chairman; Mack Davis of Jackson, VD investigating chairman; Mrs. Ora Harris of Clinton, community health services chairman; and Mrs. Bennie Morrison of Jackson, laboratory chairman.

## N.Y. Hepatitis Outbreak Is Contained

An outbreak of infectious hepatitis in Nassau County, New York, was traced to a local restaurant and an infected food handler, officials of the New York State Department of Health said.

The late 1965 epidemic produced 75 cases in the Elmont-North Valley Stream area in two weeks. Nassau County usually reports 15 cases monthly, public health officials said, and the initial epidemic reporting of 12 cases in a week triggered the investigation.

The quick discovery of the source aided in containing and overcoming the infection source, they added.



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# 190

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Hypertension has been called the price of success...and in some life-situations, the cost of failure. In either event, Metatensin lowers blood pressure, cushions the patient against stress and retards the progress of disease. Metatensin is effective and economical. It is well-tolerated over long periods.

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Metahydrin® (trichlormethiazide) 2 mg. or 4 mg. Reserpine 0.1 mg.

**In Brief:** Patients with hepatic cirrhosis or diarrheal syndromes, or under therapy with digitalis, ACTH, or potassium-losing steroids, should be observed for signs of hypokalemia. With thiazides, electrolyte depletion, diabetes, gout, granulopenia, nausea, pancreatitis, cholestatic jaundice, flushing, mild muscle cramps, constipation, photosensitivity, acute myopia, perimacular edema, paresthesias, neonatal bone marrow depression in infants of mothers who received thiazides during pregnancy, skin rash or purpura with or without thrombocytopenia, may occur. With reserpine, untoward effects may include depression, peptic ulcer and bronchial asthma. Withdraw medication at least 7 days prior to electroshock therapy, 2 weeks prior to elective surgery. Contraindications are complete renal shutdown, rising azotemia or development of hyperkalemia or acidosis in severe renal disease.

Supplied: Metatensin tablets, 2 mg., 4 mg. — bottles of 100 and 1000.



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# Directorship of American Ob-Gyn College Goes to Dr. Michael Newton of UMC

Dr. Michael Newton, professor and chairman of the Department of Obstetrics and Gynecology at the University of Mississippi, has been named Director-Elect of the American College of Ob-

stetricians and Gynecologists. Dr. Newton will join the College's administrative office on July 1 and will assume the full directorship one month later.

He will succeed Dr. Robert A. Kimbrough, Emeritus Professor of Obstetrics and Gynecology, the Graduate School of Medicine of the University of Pennsyl-



*Dr. Newton*

vania and Director of the College for the past six years. Dr. Kimbrough will retire, closing a 45-year career in medicine, most of which was spent at the University of Pennsylvania in capacities ranging from medical student to emeritus professor. He is a Founding Fellow of the College and served also as its third president.

Dr. Newton has, for more than 10 years, been professor and chairman at the University of Mississippi where he helped to establish the four-year medical school and University Hospital. As an author, he has contributed chapters to five books and has published more than 70 scientific papers.

Dr. Newton was born in Malvern, Worcestershire, England, where his father is a physician in general practice. He received his secondary education at Marlborough College, Wiltshire, where he became head of student government. After winning a major scholarship in classics to Trinity

College, Cambridge University, he attended medical school there for two years. He was then awarded a Rockefeller Foundation Studentship to complete medical school at the University of Pennsylvania from which he received his M.D. degree in 1943. He also holds B.A., M.A., and M.B., B.Ch. degrees from Cambridge University.

He served his internship at the Pennsylvania Hospital in Philadelphia and then returned to England for two years. There he worked successively as a surgical casualty officer of St. Thomas' Hospital in London, house officer for the chest surgery unit at Horton Hospital in Epsom, and surgical house officer at Queen Mary's Hospital in Roehampton. Returning to the United States in 1946, Dr. Newton was appointed instructor in physiology at the University of Pennsylvania School of Medicine. Until 1955, he served the university and its hospital in a number of capacities, including residencies and instructorships in surgery and obstetrics and gynecology. From 1954-55 he was in private practice in Philadelphia with affiliations at the Hospital of the University of Pennsylvania, Bryn Mawr, and Chester County Hospitals.

Dr. Newton has also been active in community medical affairs. He has been president of the Jackson Gynecic Society and of the Mississippi Obstetrical and Gynecological Society and program chairman of the Central Medical Society. For the past eight years he has been chairman of the Maternal and Child Care Committee of the Mississippi State Medical Association. He has been active in various College affairs, including the annual clinical meeting and the District VII Meetings and Nursing Conferences; he has also been a member of the College Committees on Industrial Exhibits and Continuing Education for



# a rapid lift from the hell of depression

**often relieves  
mental pain  
in 2-5 days**



Doré Illustration  
from  
Dante's Inferno

## **NORPRAMIN<sup>®</sup>** (desipramine hydrochloride)

Norpramin is a rapid-acting specific drug for the treatment of depression. Depressive signs and symptoms—sometimes described as “mental pain”—typically begin to improve in 2-5 days. Patients are more hopeful, less empty and less weighed down by their troubles. Norpramin has only slight sedative qualities, nevertheless anxiety *secondary to depression* is frequently relieved as depression is lifted. If anxiety or tension persists it can be controlled by adding a tranquilizer or by reducing dosage. Norpramin is not a MAO inhibitor. Side effects are usually mild.

### **DOSAGE AND ADMINISTRATION**

Optimal results are obtained at a dosage of about 150 mg./day—two 25 mg. tablets t.i.d. After achieving optimal results, a maintenance dose (50-100 mg./day) should be sought.

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### **IN BRIEF:**

**Indications:** In depression of any kind—neurotic and psychotic depressive reactions; manic-depressive or involutional psychotic reactions.

**Contraindications and Precautions:** Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established.

**Adverse Effects:** Side effects, usually mild, may

include: dry mouth, constipation, dizziness, palpitation, delayed urination, “bad taste,” sensory illusion, tinnitus, agitation and stimulation, sweating, drowsiness, headache, orthostatic hypotension, flushing, nausea, cramps, weakness, blurred vision and mydriasis, rash, allergy, transient eosinophilia, granulopenia, altered liver function, ataxia and extrapyramidal signs.

**Supplied:** Norpramin (desipramine hydrochloride) tablets of 25 mg., in bottles of 50, 500 and 1000.

## ORGANIZATION / Continued

Nurses. He is currently chairman of the Mississippi Section of the College.

In addition to Fellowship in the College, Dr. Newton is a diplomate of the American Board of Surgery and of the American Board of Obstetrics and Gynecology, a Fellow of the American College of Surgeons, and a member of the American Fertility Society, the Central Association of Obstetricians and Gynecologists, and the Association of Professors of Gynecology and Obstetrics. He is also a member of the Part II Test Committee in Obstetrics and Gynecology of the National Board of Medical Examiners.

There has been no announcement from University officials as to the naming of a successor to head the Department of Obstetrics and Gynecology.

### Special Session Focused on Medicare

Meeting in special session for the first recorded time in the history of the association, the House of Delegates voted on Dec. 16 to have the Mississippi State Medical Association to seek to qualify as fiscal intermediary for the supplementary medical insurance aspects of Public Law 89-97, the Medicare program.

Eighty-two members of the House representing component medical societies and elected officers, Trustees, and councils members were registered and seated. Drs. Howard A. Nelson of Greenwood, speaker, and William E. Lotterhos of Jackson, vice speaker, presided over the session which was convened at the Hotel Heidelberg at Jackson.

Dr. Everett Crawford of Tylertown, president of the association addressed the delegates, describing Medicare program mechanics. He said that "despite the gravity and complexity of the issues before us, we have the means, the will, the courage, and the capacity to meet and deal effectively with the challenges of the day."

A second major document placed before the House was a report of the Board of Trustees, presented by Board Chairman John B. Howell, Jr., of Canton. The report emphasized the importance of "carriers" or fiscal intermediaries who will actually receive physicians' claims for services rendered program beneficiaries under Part 1-B or the supplementary medical insurance aspect, especially in the role of conducting utilization review functions.

The Board of Trustees said that the association "has both a duty and an obligation to its members who will participate in Medicare and to its members who will not participate to employ its full resources and capacities to see that the legal and ethical intentions of each group are represented to the best of the association's abilities."

In addition to recommending that the association seek to qualify as Part 1-B fiscal intermediary, the Board reaffirmed its previous decision that the State Board of Health be designated as certifying agency for participating hospitals and extended care facilities or nursing homes.

Three resolutions, also urging that the state medical association qualify as fiscal intermediary, and that the Board of Health be named hospital certifying agency, were adopted by the delegates. The resolutions were sponsored by the Homochitto Valley, East Mississippi, and Northeast Mississippi medical societies.

Reference committee chairmen included Drs. James L. Royals of Jackson, Credentials; John G. Egger of Drew, Rules and Order of Business; and Lawrence W. Long of Jackson, Reports of Officers and Board of Trustees.

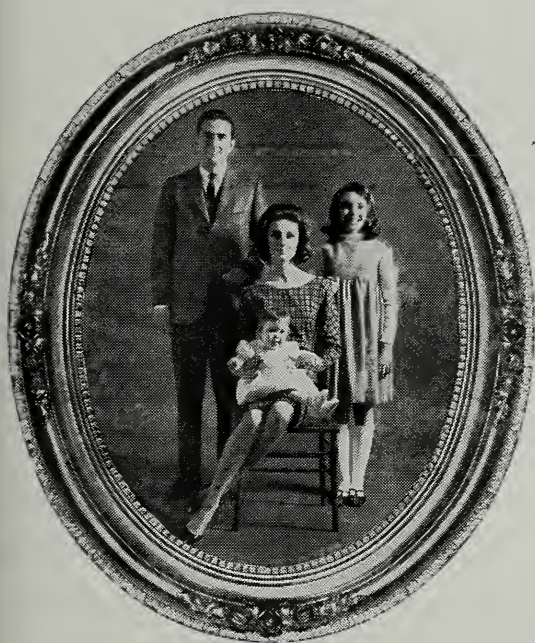
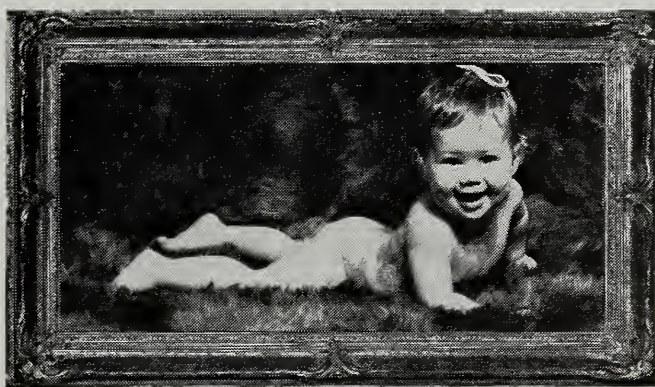
Full proceedings of the special session are published in this issue of the JOURNAL.



*"I've decided to let the reception room pay for itself."*



Turn a bundle of colic  
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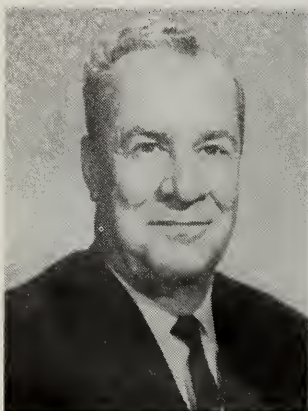
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## Dr. Jaquith Wins First Federal Foundation Award

Dr. W. L. Jaquith of Whitfield, director of the Mississippi State Hospital, will become the third physician to receive the First Federal Foundation-University of Mississippi award for outstanding achievement and distinguished service to the state and the people.

Formal presentation ceremonies are scheduled at Jackson on Feb. 26 during a special banquet. The two other 1966 awardees are the Hon. J. P. Coleman of Ackerman, judge of the Fifth United States Circuit Court of Appeals and former governor of Mississippi, and Robert D. Morrow, Sr., of Brandon, a noted agronomist-banker-businessman.



*Dr. Jaquith*

The award is sponsored annually by the First Federal Foundation and given by the University of Mississippi. The foundation is endowed by the First Federal Savings and Loan Association of Jackson, the largest such financial institution in the state. The series was begun in 1958.

Born at Vicksburg in 1914, Dr. Jaquith received his premedical education at Loyola University and was graduated with the M.D. degree from St. Louis University School of Medicine. He served his internship and residency at the Louisiana Charity Hospital in New Orleans.

Entering service in 1941 as a medical officer in the U. S. Navy, Dr. Jaquith served with the fleet in the Pacific and Far East theaters of operations. He was discharged from the service with the grade of Lieut. Commander.

Joining the professional staff of the Mississippi State Hospital at Whitfield in 1947, Dr. Jaquith was named director by the Board of Trustees of Mental Institutions in 1949. He is a past president of the Central Medical Society and present chairman of the state medical association's Committee on Aging.

In addition to membership in official medical organization, Dr. Jaquith is a Fellow of the American Psychiatric Association and a member of the Mississippi Psychiatric Society, Central Neuro-

psychiatric Association, Southern Psychiatric Society, American Association of Mental Hospital Superintendents, and National Association of Mental Health Program Directors.

## SBH Is Named to Hospital Certifying Role

Governor Paul B. Johnson, acting belatedly in response to an invitation from the Secretary of Health, Education, and Welfare, has designated the Mississippi State Board of Health as the certifying agency for hospitals and extended care facilities (nursing homes) under Sec. 1864 of Public Law 89-97, popularly known as Medicare.

The action was recommended to the governor on Aug. 30, 1965 by the state medical association's Board of Trustees and again on Dec. 16 by the Special Session of the House of Delegates. Mississippi was the last state among the 50 to make the designation.

The Medicare law provides for the Secretary of HEW making an agreement with state health departments to perform three key functions with reference to participating medical care facilities: To certify which such units may be regarded under the law as hospitals and extended care facilities, to assist in organizing utilization review systems, and to counsel and assist the facilities in program participation.

The 50 state governors were invited to name the certifying agency last August. Dr. A. L. Gray, executive officer of the State Board of Health, said that Dr. Alton B. Cobb of Jackson, a SBH division director, would head the activity. Dr. Cobb and his staff associates conferred extensively with HEW and USPHS officials over the new duties during late January.

## ICS Executive Body Sets Jackson Meet

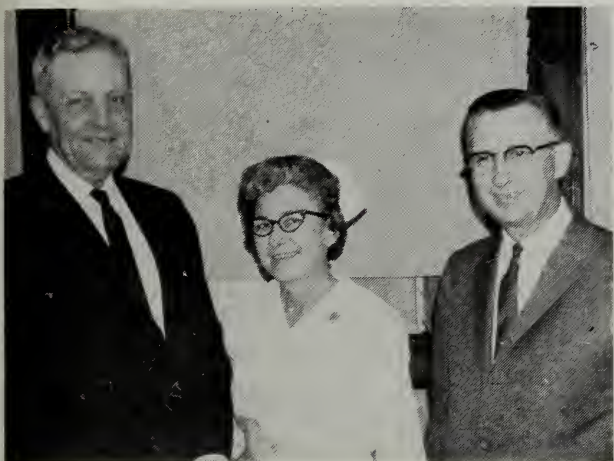
The Executive Council of the International College of Surgeons will conduct its spring meeting at Jackson March 19-20, according to Dr. Lawrence W. Long of Jackson, a regent of the College and chairman of its Finance Committee.

About 50 leaders of ICS are expected for the meet which will be headquartered at the Hotel Heidelberg. Special activities and social occasions are being planned, Dr. Long added.

College officials are exploring the possibility of conducting a one day scientific meeting in connection with the business conclave.



## EMCU Is Open to Serve Legislature



*Opening the Emergency Medical Care Unit at the 1966 Regular Session of the legislature are, from the left, Dr. James T. Thompson of Moss Point, president-elect, Mrs. Ila G. McCleave, staff RN, and Dr. William E. Lotterhos of Jackson, chairman of the Council on Legislation. Unit is located in Room 401-B of the capitol.*

## New Prairie Society Is Chartered

Formal ceremonies at Starkville on Dec. 15 marked the chartering of the Prairie Medical Society, the new component for the counties of Clay, Lowndes, Noxubee, and Oktibbeha. Dr. Everett Crawford, state medical association president, presented the charter to the new group and delivered the principal address.

The banquet occasion, attended by 100 physicians and wives, was conducted in the ballroom of the new Mississippi State University student union building. Participating with Dr. Crawford were Drs. James L. Royals of Jackson, state association secretary-treasurer, John B. Howell, Jr., of Canton, chairman of the Board of Trustees, and J. T. Davis of Corinth, District 3 Trustee.

In his address, Dr. Crawford said that the new society "is an important component of the state medical association, the sovereign provincial voice of the physician." As such, the president added, the group must be willing and able to assume great responsibility in many areas of scientific and socioeconomic concern, because of many and varied tasks confronting medicine.

Heading the new society is Dr. G. Spencer Barnes of Columbus who is president. President-

elect is Dr. L. B. Morris of Macon, and Dr. J. M. Griffith of Columbus is secretary-treasurer.

Members of the Executive Committee include Drs. T. N. Braddock, Jr., of West Point, Kermit Laird of Starkville, James C. Ratcliff of Brooksville, and Frank J. Baird of Columbus.

The Board of Censors has as members Drs. J. Henry Holleman of Columbus, Leonard H. Brandon of Starkville, and Travis E. Lunceford of Maben.

Dr. John C. Longest of Starkville was chairman of the Committee on Arrangements for the charter meeting and official host for the society's founding occasion.

Representing the Northeast Mississippi Medical Society were Drs. S. Jay McDuffie of Nettleton, secretary-treasurer, Stanley A. Hill of Corinth, MSMA past president, and Dewitt Hamrick of Corinth.

Whalen Strobhar of Chicago, newly assigned AMA Field Representative, represented the American Medical Association at the charter meeting.

The new society transferred 46 members from the Northeast Mississippi Medical Society. Its charter was authorized by actions of the Board of Trustees and House of Delegates at the 97th Annual Session in 1965.

## Dr. Minor Retires as DeSoto Secretary

Dr. L. L. Minor of Hernando retired Jan. 1 as secretary of the DeSoto County Medical Society after serving 30 years in office. He is senior among component society secretaries of the state medical association.

In extending congratulations and appreciation to Dr. Minor, the president of the state association, Dr. Everett Crawford of Tylertown, said that "through such singularly dedicated physicians as yourself, the high traditions of medicine are carried on through the years."

Dr. Minor was graduated from the Memphis Hospital Medical College, now the University of Tennessee School of Medicine, receiving his M.D. degree in 1899. His postgraduate training included two years at the Memphis City Hospital.

He is a past trustee of the association, an Emeritus member, and a member of the Fifty Year clubs of Mississippi and Tennessee.

## SBH Will Coordinate Head Start Medical Setup

Officials of the Office of Economic Opportunity's Head Start regional headquarters at Atlanta have informed the state medical association that medical aspects of the program in Mississippi will henceforth be channeled through the State Board of Health.

This was the joint announcement of Dr. Everett Crawford, president, and Dr. John B. Howell, Jr., chairman of the Board of Trustees, who said that this was the recommendation of the association to Head Start officials. The announcement came in January after a December meeting with the Atlanta OEO representatives headed by Dr. Avery Cotton, the regional Head Start medical consultant.

Initially conceived in 1965 as a two months crash program for preschool children deemed by federal criteria to be living in poverty, the Head Start program is now an on-going project of the Office of Economic Opportunity. It will offer a three-pronged service: Follow through programs in health, education, and social services; full year programs for preschool children from and after age three; and annual short-term summer programs for children entering school the coming fall.

Dr. Cotton said that "most criticisms heard from physicians and dentists in this region regarding last summer's programs were mainly concerned with the fact that physicians and dentists were not consulted early in the planning phases of the individual programs and that local medical societies and groups were not informed as to what were the goals of Head Start."

The Atlanta-based medical consultant said that immediate notification of local Head Start projects in Mississippi will be given to the state medical association and State Board of Health.

In 1965, more than \$19 million was expended on Head Start programs in the Atlanta region which included those in Alabama, Florida, Georgia, Mississippi, South Carolina, and Tennessee. An expenditure of more than \$4.5 million in Mississippi topped the list of 1965 programs in the region.

## Dr. Gronvall Is Named Acting Dean

Dr. John A. Gronvall will become acting director of the University Medical Center and acting dean of The University of Mississippi School of Medicine on Feb. 1, to serve until Dr. Robert Q. Marston's successor is appointed.

Dr. Marston resigned as vice chancellor of the University of Mississippi at the Medical Center and dean of the School of Medicine effective Feb. 1 to become associate director of the National Institutes of Health to head regional medical programs in heart disease, cancer, and stroke.

Dr. Gronvall is an associate professor of pathology and assistant dean. He came to the Medical Center as an instructor in 1960, after having earned his B.A., B.S., and M.D. degrees at the University of Minnesota, where he also took his internship and finished his residency.

## Dr. Gray Recovers, Will Resume Duties Soon

Dr. A. L. Gray of Jackson, executive officer of the Mississippi State Board of Health, is recovering from a recent illness at his home after hospitalization. It is expected that he will soon return to his office and resume his full schedule of activities.

Hospitalized in December, Dr. Gray was extended the greetings and good wishes of the association for a speedy recovery by formal action of the Special Session of the House of Delegates.

## UMC Day Is Slated for Feb. 3

UMC Day, an annual continuing education program at the University Medical Center, will be held Feb. 3. Dr. John D. Thompson, professor of obstetrics-gynecology and chairman of the department at Emory University will be guest speaker. His subject will be "The Quality of Human Reproduction."

UMC Day is a postgraduate education event held for alumni of the school, former house staffers and their wives. Scientific discussions and rounds will be a part of the session.



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# JOURNAL of the Mississippi STATE MEDICAL ASSOCIATION

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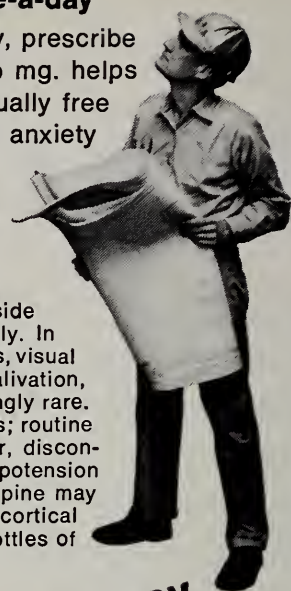
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**Side Effects, Precautions, Contraindications:** As used for anxiety and tension, side effects are unlikely. Reversible extrapyramidal reactions may develop occasionally. In higher doses for psychotic disorders, patients may experience excessive drowsiness, visual blurring, dizziness, insomnia (rare), allergic skin reactions, nausea, anorexia, salivation, edema, perspiration, dry mouth, polyuria, hypotension. Jaundice has been exceedingly rare. Photosensitivity has not been reported. Blood dyscrasias occur with phenothiazines; routine blood counts are recommended. If symptoms of upper respiratory infection occur, discontinue the drug and institute appropriate treatment. Do not use epinephrine for hypotension which may appear in patients on large doses undergoing surgery. Effects of atropine may be potentiated. Do not use with high doses of hypnotics or in patients with subcortical brain damage. Use cautiously in convulsive disorders. **Available:** 1 mg. tablets. Bottles of 50 and 500. For full information, see Product Brief.



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\*Multiple of adult Minimum Daily Requirement supplied.

†The need for these substances in human nutrition has not been established.

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Life *can* begin at forty—except when functional fatigue causes her to feel tired all the time; to start losing interest in friends and surroundings; to look and act older than her years. Alertonic—a *prescription tonic*—can help your patient become her normal self again. Alertonic helps relieve mild depression, revive interest and restore purposeful activity promptly...with a formula that is efficient *and* economical. Alertonic contains a mild central stimulant (pipradrol hydrochloride), 15% alcohol, essential vitamins and minerals. No hormones or MAO-inhibiting drugs are included. No iron. No iodine. One pleasant-tasting tablespoonful before each meal comprises the usual daily dose.

**Indications:** 1. Functional fatigue such as that often associated with: a depressing life experience or stressful time of life; advancing years; convalescence; limited activity or confinement. 2. Poor appetite and vitamin-mineral deficiency as they occur in: patients having faulty eating habits; geriatric patients who are losing interest in food; patients convalescing from debilitating illness or surgery.

**Contraindications:** As with other drugs with CNS-stimulating action, Alertonic is contraindicated in hyperactive, agitated or severely anxious patients and in chorea or obsessive-compulsive states.

**Side Effects:** Reports of overstimulation have been rare. Patients who are known to be unduly sensitive to the effects of stimulant drugs should be observed carefully in the initial stages of treatment.

**Dosage:** Adults, 1 tablespoonful; children (over 15 years old), 1 to 2 teaspoonfuls; children (4 to 15 years old), 1 teaspoonful. To be taken three times daily 30 minutes before meals.

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## South Central Blood Bank Meeting Is Set

Final plans for the Eighth Annual Meeting of the South Central Association of Blood Banks at San Antonio, Texas, March 17-19, have been completed, according to Norma M. Bender, M.T., association secretary.

The Thursday, March 17, session will be devoted to an administrative workshop. Formal scientific presentations on hemophilia, burn patients, and papers on administration in blood banking round out Friday's program. Additional scientific papers and discussions of blood banking in civil defense and disasters will close the third day.

More than 20 essayists, including physicians, administrators, and those in the technical aspects of blood banking are scheduled to appear. The association's annual business meeting will be a part of the first day program.

## Medical Use of X-ray Shows Increase

The number of Americans exposed to medical and dental x-rays increased from about 100 million in 1961 to more than 108 million in 1964, a nationwide x-ray exposure study by the Public Health Service has indicated.

The growth, which exceeds the population increase for the same period, does not reflect the increasing complexity of many medical x-ray examinations and treatments, explained Dr. Richard H. Chamberlain of Philadelphia. At the same time, he said, "a major purpose of the study was to find out where we can improve the efficiency of x-ray usage in medicine so that the maximum diagnostic value is obtained with a minimum of exposure to the patient."

Dr. Chamberlain, professor of radiology at the University of Pennsylvania and chairman of the Public Health Service Medical X-ray Committee, was moderator of a five-man panel which reported on the findings of the second phase of the PHS survey to the February convention of the American College of Radiology at Chicago.

According to the findings, more than 60 per cent of all the medical x-ray procedures for diagnosis or treatment were made under the supervision of radiologists who are particularly qualified in the uses of radiation.

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meprobamate 400 mg. +  
benactyzine hydrochloride 1 mg.

**Indications:** 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

**Contraindications:** Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

**Precautions:** *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side effects:** Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

*Benactyzine hydrochloride*—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

*Meprobamate*—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

**Dosage:** Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

**Supplied:** Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg.

*Before prescribing, consult package circular.*

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# NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

March 1966

Dear Doctor:

Blue Shield will serve three out of five Americans over 65 under Part 1-B supplementary medical insurance of Medicare. Thirty-two plans were approved as fiscal intermediaries. Sixteen private insurance organizations were appointed to serve 38 per cent of senior citizens, and one closed panel plan will cover 1 per cent.

Travelers Insurance Co. will be initial fiscal intermediary for Mississippi and Minnesota. The Hartford, Conn.-based carrier has two offices in state, Jackson and Gulfport. Announcements are expected soon as to methods of claims handling.

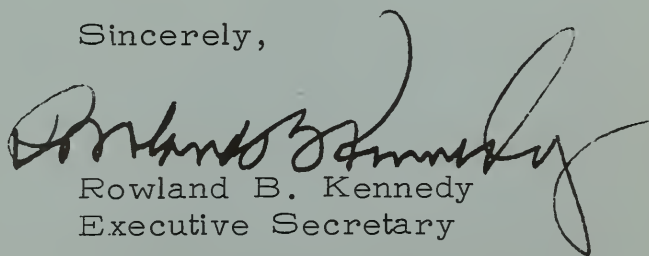
Legislators tell MSMA capitol hill representatives that mail response from physicians on HB 348, chiropractic licensure bill, has been heavy. Measure is still in Committee on Public Health and Quarantine of House. Council on Legislation urges every member to make views known to senators and representatives.

Drugs are ringing the cash registers in hospitals with profits up to 300 per cent, according to the Pharmaceutical Manufacturers Association. PMA estimates that hospitals pay 3 to 5 per cent of their total expenditures for drugs but that billings to patients for medications represent 8 to 15 per cent of hospital's income.

More American women are becoming physicians with distaff entrants into medical schools doubling in past nine years. Association of American Medical Colleges says that men are a little better as students, graduating 92 per cent of entrants against women's 84 per cent of graduates. But of all women dropping out of medical school, half do so for non-academic reasons.

American Dental Association is conferring with HEW about broad children's dental service programs under poverty and Medicare programs. New medical assistance amendments provide for dental care if states decide to seek federal matching funds. Prospects for such programs, however, are believed dim for next two years.

Sincerely,



Rowland B. Kennedy  
Executive Secretary



## DATELINE - MEDICAL AMERICA

### Rent-A-Car Organization Serves Handicapped

New York - Hertz now puts the handicapped in the driver's seat, furnishing cars with special hand controls. No additional charge is made, but two days advance reservations are necessary to permit installation and testing of special equipment. Handicapped user need show only a valid driver license. The new service, worked out with President's Committee on Employment of the Handicapped, is available in major U.S. cities.

### Medical Society Sets Long-Range Program On Smoking

San Diego - The San Diego County Medical Society has initiated a five year program to reduce cigarette smoking through organized community action. Financed by a \$1 million grant from U.S. Public Health Service, the program will include research in motivational and behavioral aspects of smokers, education, counseling, and anti-smoking clinics. Community is also unique in having organized a city council on smoking and health made up of public and private organizations.

### Military Medical Goof May Draft More M.D.'s

Washington - With Alice-in-Wonderland logic, the U.S. Army is "demothballing" old hospitals in Japan for care of Viet Nam wounded while thousands of military hospital beds in U.S. remain vacant. Wounded can be airlifted to U.S. faster than sea trip to Japan. Move will raise doctor-draft quotas to staff reactivated Japanese hospitals. Compounding mystery, South Viet Nameese casualties are being flown to New York, and Republic of Korea wounded are being sent to Texas.

### LPN-RN Hassle May Shake Up Nursing

New York - The National Association for Practical Nurse Education and Service loosed a blast at American Nurses Association over latter's proposal to abolish some schools of practical nursing. NAPNES says that LPN's are providing 75 per cent of bedside care for both the ill and aged, alleging that ANA proposal would only intensify nursing shortages. ANA says it wants to raise nursing quality through education.

### Retired Servicemen Can Sue U.S. Over Medical Care

Washington - A federal court has held that a retired member of the armed forces can sue under the Federal Tort Claims Act for injuries sustained while receiving medical care in a military hospital. Case behind precedent involved a retired serviceman who sued for injuries to a foot while in an army medical facility. Law excludes suits for injuries arising out of military service, however. Citation is Watt v. U.S., 246 F. Supp. 386 (D.C., N.Y., 1965).





ORIGINAL PAPERS

## The Diagnosis of Thyrotoxicosis

DOUGLAS L. GORDON, M.D.

Baton Rouge, Louisiana

WHEN A PHYSICIAN is first confronted by a patient, he usually develops a diagnostic impression which may subsequently be proved right or wrong. As he proceeds to question the patient, the patient's response either markedly reinforces or weakens this intuitive diagnosis. Then, in a more scientific and careful fashion, the physician attempts to further substantiate his favored diagnosis, as well as eliminate from consideration the possibility of any other disease state which might mimic this first impression.

I know of no group of patients to whom this approach has been applied any better than the thyrotoxic. At first glance, the patient's wide stare, extreme restlessness, and smooth, moist skin are striking. If the physician happens to be a few moments late beginning the interview, the patient has already thoroughly looked over the examining room and any magazines that are present, peeped out of the door at least once, and frequently has asked the nurse if the air conditioning system is working.

In Table 1, I have slightly rearranged Professor Wayne's index to show the significant signs and symptoms of the hyperthyroid patient. Each of these has been given a numerical value—plus, if present and, in some instances, minus, if absent. Notice that those findings which are generally more significant are given the higher numbers

and are those that should be looked for in the suspected case of thyrotoxicosis. Notice also that with the exception of the abnormal changes relative to the pulse and the thyroid gland, all of the others can be elicited by simply looking at the patient or questioning him without having to do further examination.

---

*In many instances, writes the author, the diagnosis of thyrotoxicosis can be made on clinical grounds. But despite the conclusiveness of the evidence, the diagnosis should always be substantiated by laboratory procedure, he says. He discusses clinical symptoms, laboratory procedures and emphasizes the problem of the antifertility drug in connection with the diagnosis of thyrotoxicosis.*

---

Wayne has applied this index to a large group of both toxic and nontoxic patients. He found that an index less than 11 indicates absence of toxicity in about 85 per cent of the cases. If the index is greater than 19, the patient is toxic in about 85 per cent of the instances. This index might be somewhat cumbersome to use, but it should emphasize that certain of these findings are more important than others. Furthermore, in the large majority of patients, an almost certain diagnosis can be obtained very quickly and easily without resorting to any elaborate laboratory procedures.

---

From the Department of Medicine, Louisiana State University Medical School and Baton Rouge Clinic.  
Read before the Seminar on Thyrotoxicosis, Section on Surgery, 97th Annual Session, Biloxi, May 10-13, 1965.

## THYROTOXICOSIS / Gordon

I would like to point out in Figure 1 that there are many exceptions to these individual clinical findings as indicated in this patient. She exhibited enough changes to give a Wayne index of plus 32, but actually had eaten enough to gain approximately 30 pounds in the six months she had been thyrotoxic. It was of particular interest to me that

TABLE 1  
"WAYNE INDEX"

	Present	Absent
Preference for cold . . . . .	+5; heat	-5
Hyperkinetic movements . . . . .	+4	-2
Auricular fibrillation . . . . .	+4	
Regular pulse: > 90 . . . . .	+3; < 80	-3
Excessive sweating . . . . .	+3	
Appetite increase . . . . .	+3; decrease	-3
Weight decrease . . . . .	+3; increase	-3
Palpable thyroid . . . . .	+3	-3
Bruit over thyroid . . . . .	+2	-2
Hot hands . . . . .	+2	-2
Palpitation, tiredness, nervousness, lid retraction and/or exophthalmos . . . . .	+2 (each)	
Moist hands . . . . .	+1	-1
Lid lag, dyspnea on effort, and/or fine finger tremor . . . . .	+1 (each)	
Total . . . . .	<div style="display: flex; justify-content: space-between;"> <span>&lt; 11 = nontoxic</span> <span>&gt; 19 = toxic</span> </div>	

as this patient was treated for hyperthyroidism, she actually lost over 10 pounds in the eight week period of therapy, apparently as a result of the decrease in nervous instability and excessive appetite. Similarly, it is possible to see patients who, for example, do not show excessive restlessness or who do not have tachycardia. The diagnosis, therefore, should not rest on any single clinical finding, but on a combination of the changes found in the overall picture.

### PITFALLS IN DIAGNOSIS

Figure 2 will also emphasize that despite clinical findings and the impressiveness of the degree of toxicity, one can be in error. This 63-year-old patient presented a clinical picture with many of the findings one sees with thyrotoxicosis, except the thyroid gland was not definitely enlarged, although nodules were felt in that region. Her weight loss was associated with a decrease in appetite, although the other findings were in line with clinical toxicity. If the Wayne index had been applied, this

would have been plus 21—also in the toxic range. No thyroid function studies were done on this patient. It was only after inadequate response to

15 wf (BRC no. 79136)

cold preference	sweating
hyperkinetic	tachycardia
weight gain	appetite increase
hot, moist hands	goiter
fatigue	nervous
bruit	lid retraction
lid lag	tremor

Wayne index +32

diagnosis - thyrotoxicosis - PBI 22.7  $\mu$ gm  
I 131 - 72%

Figure 1

antithyroid therapy occurred that the correct diagnosis was made of lymphosarcoma. Therefore, I think it important to have laboratory confirmation of the clinical impression when dealing with thyrotoxicosis. I do not feel that the laboratory should be used to make the diagnosis for you, but it should certainly be utilized before treatment of the patient is carried out. I would like to also point out that in cases where the clinical and laboratory diagnoses do not agree, that one generally is correct if he weighs the clinical impression somewhat heavier. In these instances, erroneous laboratory determination, caused by the presence of various medications, should be the first consideration.

63 wf (BRC no. 84021)

cold preference	sweating
hyperkinetic	tachycardia
weight loss	appetite decrease
hot, moist hands	goiter absent
tremor absent	nervous
exophthalmos	lid retraction

Wayne index +21

diagnosis - lymphosarcoma

Figure 2

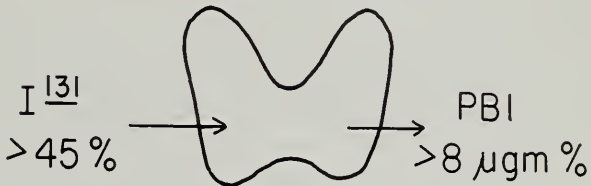
With regard to the laboratory confirmation of the clinical diagnosis, I would suggest that both the I-131 uptake and the P.B.I. determination be done, if at all possible. In discussing these particular tests, I would like to briefly mention the path-



ways of iodine metabolism, whereby iodine is taken into the gastrointestinal tract and absorbed into the inorganic iodine pool. Subsequently, it is taken up by the thyroid gland in various steps of trapping, oxidation to elemental iodine with formation of iodinated tyrosine which is then coupled to form thyroxin. This is later released from the gland and enters the organic iodine pool. The I-131 uptake is, of course, a measure of degree of trapping in the thyroid gland, but also is affected by the size of the iodine pool. In instances of iodine deficiency, for example, a small iodine pool would probably result in a greater uptake of the radioactive iodine and possibly a more rapid conversion to thyroid hormone than normal. The protein bound iodine level measures only the circulating thyroid-like hormone in the peripheral blood and this, of course, can be influenced by many factors—some of which we will discuss. The normal values for the I-131 uptake are between 15 and 45 per cent, utilizing the 24 hour reading. The protein bound iodine normal values are 4 to

8 micrograms per hundred cubic centimeters of blood.

In thyrotoxicosis, as is illustrated in Figure 3, the I-131 uptake is greater than 45 per cent and



THYROTOXICOSIS

thyroid suppression <50%

Figure 3

the P.B.I. is greater than 8 mcg. per cent in most instances. There are many other situations in which either the I-131 uptake or the P.B.I. are

TABLE 2  
PATIENT DATA

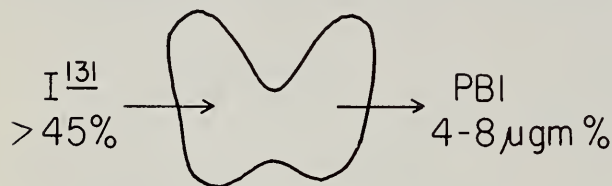
Patient	Date	I-131 Uptake (24 Hr.) Per Cent	P.B.I. Micrograms Per Cent	Comments
1. J.W. (24981) Diffuse Goiter	2/58	24	7.0	Goiter—no therapy
	9/59	19	7.0	
	9/61	12	10.2	TH gr. IV
	3/62	55	20.6	No therapy—1 week
2. M.S. (61018) Diffuse Goiter	12/59		5.9	No therapy
	2/63	30	5.4	No therapy
	11/64	63	14.5	TH gr. III
3. W.LeB. (T-51-44613)	11/62	50		No therapy
	7/22/64	14	13.7	Tapazole
	7/28/64	56		No Tapazole
4. L.B. (81963)	11/64		10.6	Enovid
	11/64	18	9.2	Enovid
	12/64		6.1	No Enovid
5. E.F. (57751)	4/59	66	9.4	Toxic
	7/60		6.5	Postoperative
	10/62		8.8	Ornade
	12/62		6.4	No Ornade
	10/63		5.9	Nil
	11/64		9.3	Orthonovum
6. B.C. (77538)	7/63		8.8	Enovid
	12/ 3/63		pregnant 2.7	Tapazole—goiter
	12/24/63		pregnant 8.4	No therapy
	2/64		pregnant 7.9	No therapy
7. J.A. (73362)	12/62	33	7.6	No therapy
	1/63	33		T <sub>3</sub> × 10 days
	4/64		7.7	No therapy
	3/65	54	18.1	Toxic

## THYROTOXICOSIS / Gordon

abnormally high. However, there are extremely few conditions which result in both an elevated uptake and an elevated P.B.I. except in thyrotoxicosis.

An additional diagnostic measure which can be utilized in questionable cases is the thyroid suppression test. This involves the administration of three grains of thyroid daily for a month or the use of 100 mcg. of triiodothyronine daily for 10 days with repetition of the I-131 uptake at that time. In the nontoxic patient, the I-131 uptake will be suppressed to less than 50 per cent of the original value, and in most instances an actual uptake of 5 or 10 per cent will be obtained. Patients with thyrotoxicosis, on the other hand, will not show this degree of suppression.

I have seen two cases of thyrotoxicosis (Table 2, patients 1 and 2) which developed while each of the patients was taking a suppressive dose of



**EUTHYROID with high  $I^{131}$  uptake**  
thyroid suppression  $>50\%$

Figure 4

thyroid hormone for the treatment of diffuse nontoxic goiter. In this table is shown the perfectly normal I-131 uptake and P.B.I. in each of these patients prior to therapy. With the onset of thyrotoxicosis several years later, the I-131 uptake became quite elevated, as did the P.B.I. This certainly indicates a lack of total suppressive effect by the existing thyroid therapy on the I-131 uptake.

Figure 4 illustrates a situation that is not uncommonly seen where the P.B.I. is within normal limits, but the I-131 uptake is elevated. The cause of these high I-131 uptakes are chiefly iodine deficiency states of various types. All of these will suppress well with thyroid hormone therapy, so that a repeat I-131 uptake will be quite low. In a certain number of patients, after treatment with radioactive iodine, the I-131 uptake will continue to be somewhat elevated despite a normal P.B.I. This particular type of patient will ordinarily not

suppress since the thyrotoxic gland is still overactive. However, the clinical findings and the normal P.B.I. usually are sufficient to give one the correct interpretation of the clinical status of the patient.

It should be kept in mind that antithyroid drugs will suppress the I-131 uptake as this is directly



**EXOGENOUS THYROID HORMONE EXCESS**  
(no goiter)

Figure 5

a result of their therapeutic effect as shown in Table 2, patient 3. Following withdrawal of the antithyroid drug within a period of several days, the uptake once again will reach considerable levels. This means that the I-131 uptake is of no value in following a patient who is undergoing therapy with antithyroid drugs and that the high rebound type of uptake is to be expected upon cessation of therapy and is in no way reflective of the clinical thyrotoxicity of the patient.

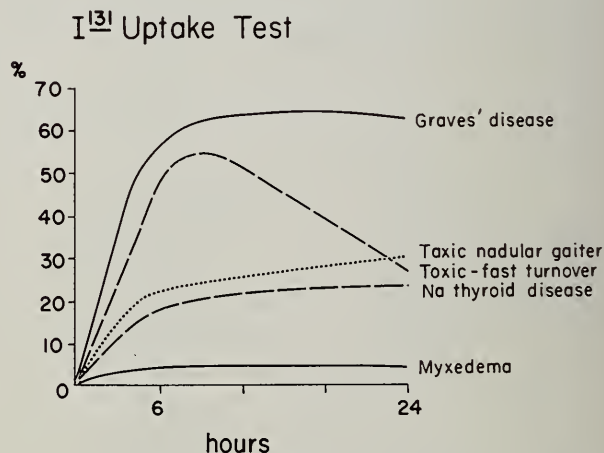


Figure 6

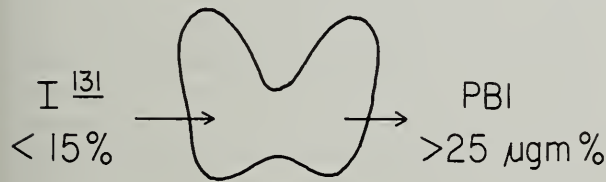
With regard to the suppressive effect of thyroid hormone, occasionally patients will be seen who are toxic as a result of taking thyroid (Figure 5). Here, we have only the elevated P.B.I., no goiter, and a very low I-131 uptake associated with the marked thyroid suppression. This is to be con-



trasted with patients 1 and 2, Table 2, who became toxic while on thyroid and had a very markedly elevated iodine uptake present at that time confirming the basic endogenous thyroid overactivity. Note that with excessive triiodothyronine (or T-3) the P.B.I. is actually low in the presence of thyrotoxicosis and can be quite misleading.

UPTAKE DIFFERENTIAL

In some centers a six hour I-131 uptake has been suggested in place of a 24 hour uptake as a means of differentiating, somewhat more rapidly, the euthyroid, hypothyroid, and toxic patients. Figure 6 shows average values taken from McConahey at the Mayo Clinic. One can see that the normal uptake is about 15 per cent in six hours and 20 per cent in 24 hours. The patient with Graves' disease shows a very rapid uptake within six hours



IODIDE CONTAMINATION

Figure 7

and very little increase from that point on. Occasionally, a patient is seen with a diffuse toxic goiter who has a very rapid uptake and turnover of hormone resulting in a lower I-131 uptake at the 24 hour reading than at the 6 hour point. We have generally used the six hour uptake only in instances where the patient appears to be toxic despite a relatively normal 24 hour uptake. Of interest here, too, are the average I-131 uptakes with toxic nodular goiter. As a general rule, nodular goiters do not have nearly the uptake that is seen with the diffusely toxic gland and in many instances do not have an uptake that is considered much higher than the normal gland reading.

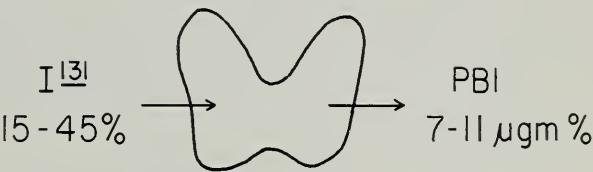
FALSELY ELEVATED PBI

The falsely elevated P.B.I. is quite a problem to most of us as Figure 7 indicates. We have already discussed hyperthyroidism resulting from thyroid hormone administration leading to this; but, iodine contamination is still our greatest problem with the high P.B.I. and low I-131 uptake resulting. The various x-ray dyes and the many preparations which contain iodine are the

causes of this problem in most instances. A common problem that we are beginning to see more often is the elevation of the P.B.I. associated with the administration of progestational drugs and antioviulatory therapy. Figure 8 demonstrates that with these progestational agents, as with pregnancy, the I-131 uptake is usually within normal limits but the P.B.I. ranges from 7-11 mcg. per cent. This is secondary to the increased binding ability of the serum protein for thyroid hormone which is brought about by the estrogen and/or the progesterone effect of pregnancy or one of the antifertility drugs.

ILLUSTRATIVE CASES

Several patients have been seen in the past year which illustrate this problem. In patient 4, Table 2, this nervous woman was thought to be hyperthyroid on the basis of a P.B.I. of 10.6 and 9.2. However, upon getting the history of Enovid therapy, an I-131 uptake was done which showed a perfectly normal value and with subsequent cessation of the Enovid therapy, the P.B.I. dropped fairly quickly to a normal level. Patient 5 was thyrotoxic in 1959. Following surgery, the P.B.I. was well within normal limits for several years, although the use of Ornade posed a problem at one time since the Ornade capsules do contain iodine. The most recent P.B.I. was elevated, but was secondary to the use of Orthonovum in recent months.



PREGNANCY  
(progestins)

Figure 8

Patient 6 was seen initially by an internist and given Tapazole therapy because of the P.B.I. reading of 8.8 associated with nervousness and fatigue. This patient was on Enovid at the time. She subsequently discontinued this and became pregnant, but continued the Tapazole therapy. When a repeat P.B.I. was done in December, it was 2.7 and was associated with a goiter, probably resulting from the blocking effect of the Tapazole, as well as the pregnancy requirement. With cessation of Tapazole therapy, the P.B.I. was promptly

elevated to a normal pregnancy level of 8.4 and 7.9. She has required no therapy since that time.

The reason that I emphasize this particular problem is that many of the patients that we see are taking these drugs without our knowledge. They have usually been seeing a gynecologist who prescribes the antifertility pills without the knowledge of the other physicians handling her case. Many patients are hesitant about informing additional physicians of this fact. For this reason, the question of these drugs should be carefully checked in any patient who has an elevated P.B.I. and clinically might be thyrotoxic.

## RBC RESIN UPTAKE

One additional test is available and of value in patients showing iodide contamination and in whom the P.B.I. and I-131 uptake are useless. This is the red blood cell (resin) uptake of triiodothyronine. Figure 9 diagrammatically shows the presence of thyroxin (T-4) in the blood and bound to thyroid binding protein. As illustrated here, a large portion of the thyroid binding protein is available for additional thyroid hormone. Upon the addition of radioactive triiodothyronine, binding of this by the TBP also occurs. Upon the addition of red blood cells or resin to this preparation, the remaining small percentage of T-3 will be ta-

ken up by the red blood cells. If this is then measured, it will be found to be normally within the range of 10 to 15 per cent, in the case of the red blood cell uptake. If a resin is used instead of the red blood cell, the procedure is somewhat easier to perform and the normal values are somewhat higher—in the range of 30 to 35 per cent uptake.

The patient with hypothyroidism has a smaller amount of thyroid hormone present and a proportionately larger amount of thyroid binding protein with which to bind the added triiodothyronine. Even smaller amounts are available for the red blood cell or resin to take up and a very low test will result. Finally, in hyperthyroidism, most of the binding sites are already filled and therefore only a small amount can be bound to the protein with a proportionately larger amount being left over to bind to the red blood cells. This produces an elevated RBC T-3 uptake. Many other diseases interfere with this procedure, such as any of the protein disturbances, cirrhosis, kidney disease, and disturbances that affect the binding of protein, such as emphysema, with resultant acidosis and change in pH. I believe the chief value of this test is its use in patients who do have iodine contamination as a complication.

Finally, I would like to present patient 7, Table 2, who showed a goiter in association with exophthalmus which was bilateral, quite marked and somewhat progressive. The patient did not appear to be toxic, The P.B.I. was 7.6 and the I-131

## T<sub>3</sub> RBC (RESIN) UPTAKE

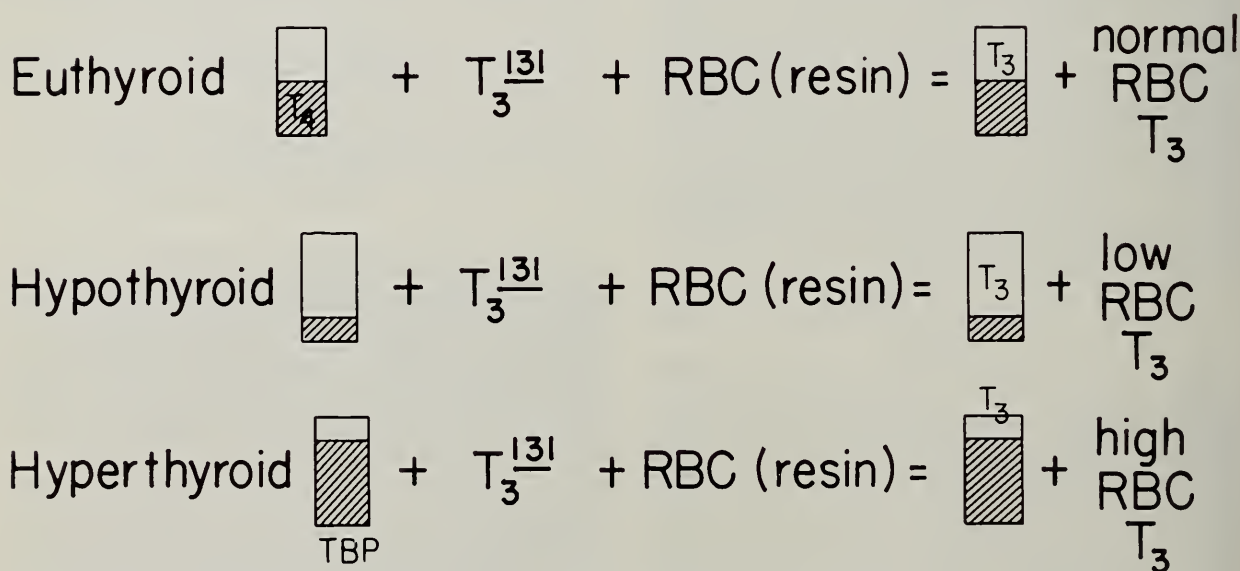


Figure 9



uptake was 33 per cent. In these patients, thyroid suppression tests do not show any evidence of suppression, indicating that they do have a serious pituitary thyroid disturbance, but not of such a degree as to result in thyrotoxicosis. This girl has been followed for several years. Only in the last two or three months has she become toxic and now shows an uptake of 54 per cent with a markedly elevated P.B.I. in addition to the clinical findings at this time. This illustrates a problem that fortunately we do not encounter very often, but it is of interest in terms of thyroid-pituitary physiology and responsiveness to the thyroid suppression test.

I would like to summarize very quickly the most important points in this discussion with regard to the diagnosis of hyperthyroidism. First, the diagnosis should be made on clinical grounds and in most instances a positive diagnosis can be made in this manner. Second, despite the correctness of the diagnosis, it should always be substantiated by laboratory procedure. More than one test should be performed since there are many areas of error involved in a single procedure. My own choice has been the use of the P.B.I. and the I-131 uptake with occasional use of the T-3 red blood cell uptake. Third, I would like to stress that the question of the antifertility drug be considered in each patient in whom the diagnosis of thyrotoxicosis is made as this will be an ever-increasing problem in the future.

Finally, there are many other procedures that have been utilized in the diagnosis of thyrotoxicosis; however, most of these are not available and in most of them there are still many problems to be worked out with regard to the various errors and uncertainties in evaluation. Therefore, I think that the tests presented here are the most useful and with them one should be fairly certain as to the diagnosis of this condition. ★★★

134 North 19th Street

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## CHEMISTRY OF FEMININITY

What are little girls made of? An old nursery rhyme says "sugar and spice and everything nice." While a girl contains about four ounces of sugar, there are also:

Chlorine in sufficient quantity to disinfect five swimming pools; over 75 pounds of oxygen; two ounces of salt; eight gallons of water; three pounds of calcium; 24 pounds of carbon; phosphorus for a case of matches; fat for a dozen bars of soap; enough iron to make a six penny nail; and enough glycerine to fire a 35 mm shell.

But no spice!

# Mississippi's Special Tuberculosis Control Project

J. T. HAMRICK, M.D.

Jackson, Mississippi

TUBERCULOSIS IS STILL a problem of considerable magnitude, and measures for its control are complex. Increased reduction in the incidence of tuberculosis disease and infection is achievable, but this will require expanded and intensified public health effort.

The field of tuberculosis control is a broad field, and this paper will cover only a portion of it. The portion to be described is the special tuberculosis control project that is being conducted with the assistance of special project grant funds provided by the U. S. Public Health Service, Communicable Disease Center, Tuberculosis Branch.

In Mississippi, tuberculosis remains a major public health problem and is increasing in incidence. In 1964, there were 1,300 new cases reported. This is the highest number reported for a single year since 1951.

## REPORTED CASES OF TUBERCULOSIS, MISSISSIPPI, 1950-1964

1950	1,462	1958	977
1951	1,506	1959	898
1952	1,232	1960	824
1953	1,243	1961	695
1954	1,179	1962	747
1955	1,033	1963	947
1956	869	1964	1,300
1957	872		

You will note that there was a general downward trend until 1961, but since that time there has been a rather marked increase in the number of cases reported.

Data collected for the first four months of 1965, but not shown in the chart, indicate that the upward trend is continuing, as a total of 530 cases

were reported as of April 30. If the trend established thus far continues, there should be between 1,400-1,500 new cases reported this year. These increases of the past few years are occurring in spite of a long established, coordinated, state-wide out-patient drug therapy program and well-designed control policies.

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*Tuberculosis is still a major public health problem in Mississippi. More cases were reported in 1964 than in any year since 1951. This paper discusses a special tuberculosis control project being conducted in the state with the assistance of project grant funds from the U. S. Public Health Service, Communicable Disease Center, Tuberculosis Branch.*

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In view of the large tuberculosis problem in the state, the board of health applied for special project grant funds in early 1962. The project was approved to begin operations in March 1962. It was originally confined to five counties, Leflore, Sunflower, Bolivar, Washington, and Lowndes, but since January 1964, the project has rapidly expanded and since March 31, 1965, has involved the entire state.

I would like to point out some background information on tuberculosis control and eradication. The Arden House Conference on Tuberculosis, which was held at Harriman, N. Y., Nov. 29 to Dec. 2, 1959, recommended a program for the widespread application of chemotherapy as a public health measure for the elimination of tuberculosis in the United States. In 1960, a committee appointed by the U. S. Public Health

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From the Tuberculosis Control Program, Mississippi State Board of Health.



Service set up goals and standards for elimination of tuberculosis. The long-term objective was, of course, the elimination or eradication of tuberculosis and the short-term objective was to establish intermediate goals and set up performance standards. These standards will be discussed later. In December 1963, the Surgeon General's Task Force on Tuberculosis Control in its report, "The Future of Tuberculosis Control," set out in more detail the method for implementing these standards and made definite recommendations for appropriations.

Guided by the task force report, the Special Tuberculosis Project in Mississippi is undertaking to increase and intensify both state and local health department services.

### PROJECT OBJECTIVES

The specific objectives of the project for the next 12 months are:

1. To ensure that at least 90 per cent of the total known active tuberculosis cases in all counties of the state are under treatment.
2. To ensure that at least 80 per cent of the active cases at home have a bacteriological examination every six months.
3. To complete diagnosis within six months on at least 75 per cent of all patients classified as tuberculosis suspects.
4. To ensure that each tuberculosis case being followed by the board of health receives at least one evaluation by a specialist in diseases of the chest each year.
5. To ensure that at least 90 per cent of all close contacts of newly reported active cases and reactivated cases promptly receive complete examinations and that those found to have active disease receive appropriate care, and that certain groups of contacts receive prophylactic treatment under suitable supervision.
6. To increase follow-up services to unhospitalized patients with inactive tuberculosis, so that they will be followed a minimum of five years, instead of the present three.
7. To administer approximately 100,000 tuberculin tests. These tests will be given to persons in high risk groups, such as contacts and other persons who are/or might be associated with active cases, as well as routine testing of first grade school children, teachers, school bus drivers, school employees, barbers, beauticians, foodhandlers, and maternity patients in health department clinics, and other persons referred in for such tests by physicians in private practice.

8. To ensure that when children six years of age, or younger, are identified as tuberculin reactors, their close associates receive tuberculin tests and/or chest x-rays and any other indicated diagnostic service and that those found to have active disease receive appropriate care.

9. To locate and return to treatment at least 75 per cent of the recalcitrant and lost patients now listed on the State Tuberculosis Register.

### X-RAY SCREENING

The Tuberculosis Project is not confined to only the state and local health department program, but is now touching the University Medical Center in Jackson. As a part of the case finding activities of the project, an x-ray screening program is being set up at the University Hospital. The primary purpose of this x-ray screening is to pick up undiagnosed cases of tuberculosis. However, it should uncover other unsuspected chest diseases and conditions, and this aspect of the program is as important as the tuberculosis case finding aspect. The groups to be screened include outpatients, inpatients, students and faculty of the University Medical Center, staff and employees of the hospital, and other groups in the medical center that the administration of the hospital feel should be x-rayed because of risk of exposure to tuberculosis. The x-ray equipment is to be purchased by funds provided jointly by the Mississippi State Board of Health and the Mississippi Tuberculosis Association. However, the operating funds are to be provided by special project funds from the U. S. Public Health Service.

Another undertaking that the state board of health is promoting at the medical center is a teaching position in tuberculosis. The school of medicine is interested in seeing this established, and a meeting is planned in the near future to work out the details. If this could be worked out, all new physicians graduating from the medical school would be aware of the Tuberculosis Control Program and would be given additional instruction in clinical aspects of the disease itself.

### SURVEY BY COUNTIES

One major aspect of the project was to survey the tuberculosis case load in the county health departments to see how Mississippi compared to the standards of performance that were set up for eradication of the disease. By Dec. 31, 1964, 66 of the 82 counties of the state had been surveyed, and the statistics prepared reflect the conditions found in these counties. (See Figure 1.)

TUBERCULOSIS CONTROL / Hamrick

Standard 1 of the project states that the health department should obtain a satisfactory report on at least 75 per cent of the referred tuberculosis suspects within six months after the end of the initial screening operations. The 66 counties surveyed revealed that only 50 per cent of these pa-

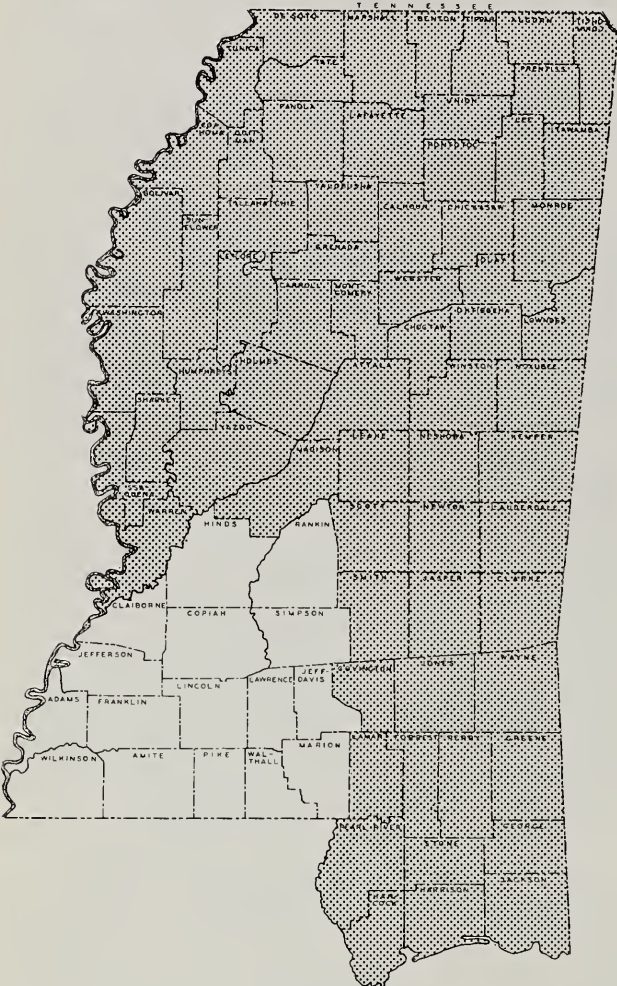


Figure 1

tients had completed the necessary examinations. Standard 3 states that 90 per cent of the close

contacts to newly discovered active cases should be examined promptly, no later than Jan. 31, of the year following the case report. The 66 counties surveyed revealed that 83 per cent of the contacts had been examined.

Standard 5 states that at any given time at least 90 per cent of all the known active cases should be in the hospital or under drug treatment elsewhere. The 66 counties surveyed revealed that 92.4 per cent of these patients were either hospitalized or on the home treatment program.

Standard 6 states that at any given time, at least 80 per cent of all cases at home with active disease at last report should have had a bacteriological examination within the preceding six months. The 66 counties surveyed revealed that 74.4 per cent of these patients had had bacteriologic examinations.

Standard 2 deals with follow-up of positive skin test reactors and Standard 4 deals with tuberculin converters. No statistics are being kept on these two items at present, so there was no way to evaluate how we compare to the recommended standards.

This survey has shown us some aspects of the control program that are in need of additional emphasis.

In summary, the project is designed to help the board of health improve and intensify the general tuberculosis control program. The project should and already has pointed out some areas that are in need of improvement. It will not replace our control program, but will only assist us in doing a better job for Mississippi. ★★★

2423 North State Street  
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HAIR OF THE DOG

Two drunks were lost in the Alps. Soon, they spotted a St. Bernard rescue dog with the traditional keg of brandy slung around his neck.

"Look," cried one of the drunks. "Man's best friend!"  
"And look at that big dog carrying it," observed the other.





# The Kansas City Case

RICHARD P. BERGEN, J.D.

Chicago, Illinois

IN DECEMBER, 1964, A CASE was argued before the Federal Trade Commission that undoubtedly will have a serious effect on the future of blood banking in this country, regardless of its outcome. This case should be of real interest to anyone connected with blood banking, including, as exemplified by the respondents involved, physicians, hospitals and medical associations.

On July 5, 1962, following an investigation of more than five years, the FTC issued a complaint against a number of respondents, both corporate and individual, in the Kansas City area. The respondents include the Community Blood Bank of the Kansas City Area and its officers, directors, administrative director and business manager; the Kansas City Area Hospital Association and its officers, directors and executive director; three hospitals, individually and as representatives of all members of the hospital association; 16 pathologists, and two hospital administrators. Thus, there were 58 individual respondents, 24 of whom were subsequently dismissed by the hearing examiner.

FTC's complaint charged the respondents with having entered into an agreement or planned course of action to hamper and restrain the sale and distribution of human blood in interstate commerce. It was charged that the respondents conspired to boycott a commercial blood bank in the sale and distribution of blood in commerce, and that the conspiracy was to the injury of the public and unreasonably restricted and restrained inter-

state commerce in violation of Section 5 of the Federal Trade Commission Act.

Section 5 of the Act simply states that: "Unfair methods of competition in commerce, and unfair or deceptive acts or practices in commerce, are declared unlawful."

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*The Kansas City Case, writes the author, should be of real interest to anyone connected with blood banking, including physicians, hospitals and medical associations. He discusses the important facts and the legal questions involved and comments on the importance of the case to the future of blood banking in the United States.*

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The hearing commenced May 20 and ran until September 24, 1963. Almost 100 witnesses testified. One thousand exhibits were offered, comprising about 10,000 pages. The transcript was over 8,000 pages. The attorneys submitted over 800 pages of briefs and proposed findings. The initial decision of the hearing examiner runs 180 pages, plus appendices.

Obviously, I can only touch very lightly on a case of this scope and complexity. Perhaps this is just as well. Inasmuch as this matter is still undecided and will probably end up in the courts, I don't think it too appropriate for me, as an attorney, to express any personal opinions as to the relative merits of the controversy, and I shall not do so. I shall merely mention briefly the important facts and the legal questions involved and then comment on the importance of this litigation to you.

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From the Law Department, American Medical Association.

Read before the Mississippi State Medical Association—Mississippi Hospital Association Administrative Seminar on Blood and Blood Banking, Jackson, Aug. 12, 1965.

## KANSAS CITY CASE / Bergen

The facts, very briefly stated, are as follows:

In 1953, many of the hospitals in the Kansas City area had their own blood banks and were operating quite well with them, but the constantly increasing demand for blood indicated that a central blood bank was desirable. Thus, the Jackson County Medical Society adopted a resolution recommending that a community blood bank patterned after the blood centers in San Francisco, Milwaukee, Dade County, and Tulsa be established. In December 1953, the organizational meeting of the Community Blood Bank was held, and it was officially incorporated soon thereafter. However, due to a number of factors, including varying civic viewpoints as to how such a bank should operate, Community did not begin actual operation until April, 1958.

### THE MIDWEST BANK

In 1955, a commercial blood bank, known as Midwest, commenced operations in Kansas City. It was owned and operated by a Mr. and Mrs. Bass. Mr. Bass had no medical training or background. He had completed grade school. Prior to opening Midwest, he had operated a photographic studio. Previously he had been a used car salesman and a mandolin teacher. Mrs. Bass actually directed the blood bank procedures. She referred to herself as an "R.N.," but was not licensed as a nurse in either Missouri or Kansas. There was no testimony that she ever had any experience or training in blood banking. Originally the Bass's were in partnership with another man, but according to respondents' brief, "apparently ill feeling developed, since, on one occasion, Mr. Bass pulled a gun and ordered Mr. Dolph out."

The original medical director of Midwest was a 78-year-old general practitioner who had no training in blood banking. One laboratory assistant in the bank was hired when he was an inmate of the Kansas Penitentiary. Another employee, who worked in all parts of the bank, was described as a former "mixologist."

Midwest opened its doors for business in a slum area, and a sign was put in the window stating, "Cash Paid for Blood." Midwest's donors were described as Skid Row derelicts and winos. One witness testified that when he went to Midwest, there were worms all over the floor, but Mrs. Bass explained that an exterminator took care of these insects.

Immediately following Midwest's opening, the pathologists in the area met and worked out a more formalized system whereby the hospitals could ascertain daily what blood was available from the other hospital banks. Subsequently, there were a number of meetings of physicians and hospital personnel, and blood banking was discussed. In its brief, FTC lists nine meetings of hospital representatives at which blood banking was discussed, and in another appendix sets forth 20 additional meetings of physicians and others. Charts are included that show which of the individual respondents attended which meetings. As an employee of a medical association, I am not surprised to discover that doctors and hospitals hold frequent meetings.

### ALLEGED CONSPIRACY

The purpose of the government in discussing all these meetings is to attempt to show that a conspiracy to boycott Midwest was afoot. Nevertheless, by the FTC's own admission, there can be found only two possible instances of the existence of an express agreement to boycott. Even these are debatable and are not supported by any written evidence.

After Community Blood Bank, a nonprofit organization, commenced actual operations in 1958, most of the hospitals in the Kansas City area entered into agreement with it for their blood supplies. The written contract does not state that Community shall be the exclusive source of the hospital's blood, but the hearing examiner concluded that this was the practical effect of the agreement. The government showed a number of instances where hospitals, after commencing relations with Community, refused to accept blood from Midwest, although the respondents' attorneys argued that these 24 instances were minimal in view of the more than 200,000 units of blood transfused in Kansas City during the period of time in question.

### FTC CONTENTIONS

The attorneys for FTC argue that when all of the events of this case are added up, they amount to a conspiracy to boycott. They contend that the informal federation agreed upon by the pathologists to exchange blood among the hospitals, after the commencement of business by Midwest, indicated a consciousness that such an agreement would reduce the need for the purchasing of blood from a commercial bank. FTC admits that there is no direct evidence of an express agree-



ment among the doctors and the hospitals, apart from the two statements I mentioned, but they say an express agreement is not necessary.

They argue that through casual conversations between pathologists, it follows that each knew that the other was entering into a course of action which would inevitably circumscribe opportunities for Midwest to supply blood to the hospitals. They state there was consciousness that the activity in which each engaged would, when joined with the action of others, result in a restraint of trade. There is also legal argument concerning the doctrine of "conscious parallelism." I am not going to attempt to discuss the application of these esoteric antitrust legal concepts to this case, because I would only reveal my ignorance by doing so.

Although a number of legal questions are involved, I believe the heart of this case is the existence or nonexistence of a conspiracy to boycott within the meaning of Section 5 of the Federal Trade Commission Act. That this is the central issue became somewhat clear at the argument in December before the Commission. It is undoubtedly a difficult question.

### THE DILEMMA OF MIDWEST

As I see it, we have on the one hand qualified and conscientious physicians who are reluctant to have their patients receive blood from what they could easily conclude, in their medical judgment, to be a dubious source. I don't think we can expect physicians to cogitate on conscious parallelism and concerted refusal to deal when making decisions about transfusing their patients. On the other hand, there was no evidence that there was anything scientifically "bad" about Midwest's blood, and the largest hospital in the area used it in great quantity for a long period of time. It would also appear that virtually all of the hospitals in the area refused to deal with Midwest and that Community had a virtual monopoly.

The other legal issue which appears to me to be of real substance is whether whole human blood is a commodity or product in commerce and thus within the scope of the FTCA. Respondents argue that blood is living human tissue and can no more be bought or sold as a commodity than can a human being. FTC argues that blood is a biological product, pursuant to the provisions of the federal Public Health Service Act and as licensed by NIH. They also claim that it is a drug pursuant to the Federal Food, Drug, and Cosmetic Act. Thus, they conclude that it is a commodity or product in commerce.

There is a line of court decisions holding that the supplying of blood by a hospital is a medical service rather than the sale of a product. These cases arise, however, under interpretations of the Uniform Sales Act and generally deal with the question whether there is an implied warranty of fitness for use when blood is supplied to a patient by a hospital. The attorneys at the AMA have always believed that the supplying of blood is a service rather than a sale, but in the present case, we are dealing with a different statute and a different type of operation, that is, the activities of a blood bank rather than a hospital.

### DEFENSE ARGUMENTS

Respondents' counsel have raised other interesting legal defenses, such as the contention that nonprofit corporations are not subject to the Federal Trade Act; that this action cannot be maintained against all the members of the Kansas City Area Hospital Association as members of a class because such hospitals do not constitute a class for jurisdictional purposes; and that the proceeding is not in the public interest. As declared by the U. S. Supreme Court, a proceeding by the FTC must be in the public interest, and I think it is a very good question whether the federal government's actions against a nonprofit community blood bank, such as in this case, are in the public interest.

The proposed order of the FTC, very briefly stated, would require the respondents to cease and desist from taking part in any plan or practice that restricts any blood bank operator, licensed to engage in the sale and distribution of blood by NIH, from selling blood to, or purchasing it from, any hospital, blood bank, or other user of blood. They must also cease and desist from any plan preventing a licensed blood bank from becoming a member of the AABB, the North Central District Blood Bank Clearing House, or from carrying on trade in blood through any such system.

### CEASE AND DESIST

They must cease and desist from any plan that prevents any blood bank operator from carrying out contracts for the furnishing of blood to any person, and from preventing any person from purchasing blood under such contracts. The concluding paragraph of the order states that nothing in the order shall prevent any physician from exercising his medical judgment to determine what blood, and from what source, shall be utilized

## KANSAS CITY CASE / Bergen

in the care of his patient. Violation of an FTC cease and desist order, after it becomes final, subjects the violator to civil penalties up to \$5,000 for each day that the violation continues.

What could be the practical effect of this decision on you? I would think individuals and corporations in other communities would show some reluctance to take part in community blood banking if there is an adverse decision. Let me quote two interesting statements by the attorneys for the FTC.

"The form into which Community was molded by joint action was also a deterrent to the existence of other blood banks. . . . The fact that this system was copied from blood banks in other areas is not an excuse. An instrument tried by someone else which will create a desired effect may well be adopted for that very reason. . . ." Certainly, from the point of view of excluding a commercial blood bank, no design could have

been much better than the one which was actually adopted.

There are approximately 125 to 150 community blood banks in the United States, which are usually local monopolies in that, in the community in which they serve, no other processed blood is delivered directly to the hospitals served by the community nonprofit blood bank.

I would strongly suggest, then, if you have not already done so, that you get a thorough legal checkup by competent antitrust counsel of the blood banking operation in your community and that you follow his advice.

One of the reactions to this case has been the introduction in Congress of a Bill, S. 1353, which would exempt certain activities of nonprofit blood banks and of physicians and pathologists from the Antitrust laws. This would be one way of resolving the problem. This bill has been referred to the Committee on the Judiciary, but thus far no action has been taken. ★★★

535 North Dearborn Street

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## SUPER SPA

"Is this town a healthy place to live?" inquired the tourist of a local resident.

"It sure is," was the reply. "When I came here, I didn't have the strength to utter a word; I was practically bald; I couldn't walk across the room; and I had to be hand-fed and lifted from my bed."

"Remarkable," said the tourist. "How long have you lived here?"

"Oh, I was born here," said the native.



# Radiologic Seminar XLVII

## Fetal Postmaturity

JOHN W. EVANS, M.D.  
Jackson, Mississippi

FETAL POSTMATURITY has been defined as a condition of unknown etiology where pregnancy has lasted for more than 295 days from the last menstrual period.

The diagnosis depends for the most part on a dependably regular menstrual history. Where this history is vague and indefinite, the diagnosis becomes difficult because there are no external signs visible on the mother or fetus which may aid in making the diagnosis.

It becomes important to suspect such a situation because the hazards to a postmature fetus during delivery increases measurably. In fact, it has been shown that intrapartal mortality after 308 days pregnancy duration increases to 10.9 per cent whereas it is only 4.7 per cent between 294 to 300 days. Some authorities feel that it is a greater cause of perinatal mortality than is prematurity.

### DELIVERY HAZARDS

Hazards of delivery increase because the placenta becomes insufficient to support the fetus beyond a certain age. Chronic fetal hypoxia results from this placental disfunction, and delivery becomes critical. The fetus should therefore be protected from a prolonged labor or any undue trauma. The fetal skull becomes more rigid as does the fetal skeleton. Shoulder dystocia, because of increased skeletal rigidity, becomes an acutely serious problem. In the older primigravidas, the problem is even more acute.

When the condition is suspected clinically, the radiologist is frequently called upon to aid in the

diagnosis. Routine radiographs of the abdomen and some form of pelvimetry measurements of the maternal pelvis using controlled technical factors are helpful, in many cases.

Many radiographic signs are usually present when this condition exists which will, if identified, give a reasonably accurate estimate of the period of gestation. Unfortunately, due to the usual compressed intrauterine fetal position, many of these signs are obscured or distorted.

### FETAL STUDIES

Many meticulous studies have been made on the size of the fetal skull, both in the fronto-occipital measurements and the biparietal measurements, which have been helpful. Tables of measurements of the total fetal length and the length of the femoral shaft correlated with clinical studies are available. Unfortunately, these require correction for magnification and distortion due to position. It is frequently impossible to obtain an accurate measurement of the length due to this distortion by foreshortening or elongation of these structures without many carefully positioned radiographic exposures. Needless to say, the amount of x-ray exposure to any human being should be limited to the clinical necessities but it is even more important where a fetus is concerned.

### RADIOGRAPHIC PROCEDURE

It is our practice to make three routine radiographs: one of the entire abdomen showing all the fetus, one anteroposterior projection of the pelvis with the Colcher-Sussman Pelvimeter in place, and one lateral exposure of the pelvis

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Sponsored by the Mississippi Radiological Society.  
From the Department of Radiology, St. Dominic-Jackson Memorial Hospital.

with the pelvimeter in place. These three radiographs afford us an evaluation of the overall fetal size, the number of fetal skeletons present, together with pelvic contours and measurements. It is our feeling that routine pelvic measurements should be included to evaluate pelvic measurements and contours even in multiparas because full information should be available to the clinician at the time of delivery so that he might anticipate any abnormality which might produce cerebral trauma or reduction of oxygen to the fetus.

## AGE OF FETUS

The size of the fetus, more frequently than not, offers no accurate estimate of the fetal age; in fact, it cannot be correlated because a postmature fetus is frequently smaller than normal because it has lost weight due to placental insufficiency. Overall density of the skeletal ossification is a matter of judgment and experience and therefore subject to many variations.

Perhaps the signs most easily identified on these routine studies are the centers of ossification for the distal femur and upper tibia. The distal femoral epiphysis usually becomes visible on radiographs at the 36th week and by 40 weeks has become well rounded, prominent, and dense.

The upper tibial epiphysis usually ossifies at the 40th week at or about term. The tarsal cuboid ossification center appears also at the 40th week. This sign, however, is frequently obscured by superimposition of the soft parts, and it is difficult to identify.

## IDENTIFICATION TECHNIC

When the knees of the fetus are identified on properly exposed radiographs, the adjacent ossification centers of the distal femur and upper tibia can be easily identified if present. When the knees override the maternal spine, it is a simple matter to turn the maternal abdomen slightly to one oblique position or the other and repeat one radiograph of the area using a limiting cone or collimator. This will usually afford excellent detail for identification.

Figure 1 is a full anteroposterior projection of the abdomen which reveals one fetus in a cephalic presentation. It is a radiograph of a 23-year-old primigravida whose menstrual history was extremely reliable and who was in her 45th week of pregnancy. This figure could be reliably estimated because since her menses began at 16, her periods have occurred at a 28 day cycle with clocklike regularity. An evaluation of the overall density of the fetal skeletal ossification indicates at least full maturity. The corrected biparietal diameter of the fetal skull indicates a weight of at least 8 and



Figure 1



Figure 2



½ pounds or over. The fetal skull also is well ossified and appears rigid. Just to the right of the maternal spine are easily identified the centers of ossification for the distal femur and upper tibia. Routine pelvimetry measurements appear adequate for a normal size fetus. However, the sacral curve was flattened and the fetus appeared overly large. The cervix never ripened and the fetal head would not engage. For these reasons a section was done two days after the radiographic studies were made with spinal anesthesia and a normal infant weighing 9 pounds 9 ounces was delivered.

Figure 2 is a radiograph of an abdomen showing a fetus demonstrating an easily identified distal femoral epiphysis but not upper tibial epiphysis. The absence of a demonstrable upper tibial epiphysis indicates that the fetus is slightly less

than 40 weeks. At delivery the infant weighed 6 pounds 6 ounces. ★★★

969 Lakeland Drive

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## BY AND BY

A group of tourists were lined up to sign the visitors' book at the historic shrine. One little boy pulled away from his mother and pressed forward to sign the book ahead of a Catholic sister. Quickly, the mother admonished him:

"Wait till the nun signs, Shelley."

# Clinicopathological Conference LXXIV

Conducted by the Department of Pathology  
Mississippi Baptist Hospital  
Jackson, Mississippi

THIS EIGHT-MONTH-OLD, colored female was admitted because of abscesses of the thigh.

She was born at term, with birth weight 4 pounds, 5 ounces (1,956 gm.). She had been sick "all her life," with diarrhea and failure to gain weight. Three weeks prior to admission, she developed an abscess on the inner aspect of the right thigh. One week later, she was seen by a physician who gave her a shot and started warm soaks. A week later, a second abscess developed in the posterior aspect of the same thigh. This opened spontaneously and drained pus. Shots were continued for a total of three. Three days before admission, a large area of skin sloughed from the draining second abscess. During her illness, the patient had fever but no seizures. (The recorded history is not clear as to whether fever preceded the development of abscesses.) The patient took solids fairly well but took the bottle poorly. She had been bitten by a rat on the left thigh at four months of age.

The patient had not received routine infant immunization. She was her mother's 12th child, and was one of twins. No mention of the health of her twin or other siblings is made in the chart.

## PHYSICAL EXAMINATION

On examination, the patient appeared poorly developed and malnourished, but in no acute distress. She weighed 8 lbs. The rectal temperature was 101.8°. The ears and pharynx were normal and the sclerae white. No masses were felt in the neck and no lymphadenomegaly was recorded. The heart and lungs were normal. The abdomen was distended, with "markedly" enlarged liver and spleen. The right thigh was the site of a large necrotic area posteriorly at the gluteal fold, and three smaller similar areas anteromedially. No fluctuation was present. The range of motion of

the right hip was normal, and there was no peripheral nerve deficit.

Laboratory work showed a hemoglobin of 5.6 gm. per cent and a hematocrit of 18 per cent. WBC was 5,800, with 6 per cent monocytes, 37 per cent lymphocytes, 19 per cent segmented PMLs, 33 per cent band form PMLs, 3 per cent metamyelocytes, 1 per cent myelocytes, and 1 per cent promyelocytes. Five metarubricytes (nucleated RBC's) were counted per 100 leukocytes in the peripheral blood smear. Moderate hypochromia and anisocytosis of the erythrocytes was present. Urinalysis showed a pH of 6, negative protein and sugar, 3-5 WBC/hpf, 0-2 RBC/hpf, and 4+ bacteria.

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*The case presented is that of a chronically ill infant with fever, hepatosplenomegaly, and pancytopenia. Considered in the differential diagnosis are blood dyscrasias, storage diseases, and infections.*

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X-rays on admission showed "no definite fracture, periosteal reaction, or destructive lesion" of the pelvis or femurs. The femoral epiphyses were quite small and poorly mineralized, with only the left being calcified. There was x-ray evidence of growth arrest, but no evidence anywhere of osteomyelitis. Chest films, skull films, and IVP were normal.

The patient had "slight diarrhea" initially which stopped after 48 hours on appropriate formula. However, she ran a febrile course during her entire hospitalization, with daily fever spikes to 102-103 degrees (R) which dropped promptly after aspirin was given. She was treated initially with tetracycline 30 mg. q6h and penicillin



300,000 units IM q6h, but this had no effect on the fever. A trial of chloramphenicol and Lincosin had no effect. However, the abscesses ceased draining and began healing after antibiotics were started. The fever and hepatosplenomegaly persisted, and she had intermittent abdominal distention, but she ate well and appeared to improve. She was given a total of 200 cc. of blood, as well as parenteral iron, but her hemoglobin remained at about 6.8 gm. per cent with marked hypochromia on the smear. No bloody diarrhea or other source of blood loss was apparent.

Further laboratory data accumulated during her hospitalization is as follows. Culture of the thigh abscess showed mixed bacterial flora which was overgrown by *Proteus*, preventing further separation and identification; blood cultures showed no growth but were still being held at the time of discharge; agglutinations were negative for typhoid, paratyphoid, *proteus* OX-19, brucella, and tularemia; sickle cell preparation was negative; hemoglobin electrophoresis showed AC hemoglobin (heterozygous Hgb C disease); intermediate strength PPD skin test was negative. A histoplasmin skin test was put on but results are not recorded.

### COURSE IN HOSPITAL

On the third hospital day, the WBC was 4,000 with 2 per cent monocytes, 68 per cent lymphs, 28 per cent segs, 2 per cent bands, and no metarubricytes; the reticulocyte count was 2 per cent and the platelet count was 258,000. On the 12th day, the WBC was 4,000, with 12 per cent monocytes, 58 per cent lymphocytes, 26 per cent segs, and 4 per cent bands. The reticulocyte count was 5.2 per cent with decreased platelets and many smudges on the smear as well as 2 per cent metarubricytes. Two days later, the WBC was 1,050 with 84 per cent lymphocytes, 8 per cent segs, and 8 per cent bands. Platelet count was 60,000. Red cell osmotic fragility studies were essentially normal.

On the 13th hospital day, a bone marrow aspiration was done which showed marked lymphopenia and myelopenia, 5 per cent eosinophilia (normal 0-3 per cent), 3 per cent monocytes (normal 0-2 per cent), 2.5 per cent histiocytes (normal 0-1 per cent) and 1 per cent blasts (normal 0-1 per cent). Megakaryocytes were sparse. No cells suggestive of Gaucher's, Letterer-Siwe's, or Niemann-Pick's diseases were found. Storage iron was increased. The erythrocytes showed marked anisocytosis, poikilocytosis, hypochromia, and polychromatophilia. Only enough

marrow was obtained to make a routine smear, and since there was not enough for cell block, special stains and culture, the examination was considered inadequate.

On the 16th hospital day, a diagnosis was established.

### CLINICAL DISCUSSION

*Dr. Lee Owen:* "To summarize the protocol briefly, we are here presented with a child who was seen because of abscesses or ulcerations on the lower extremity which failed to respond to therapy. The child had had a spiking temperature elevation for apparently several weeks and had been chronically ill. The chronicity of the illness is evidenced by the very poor weight gain of this child since birth (weighing only 8 pounds at eight months of age). We do have to consider the fact that she was one of twins with a possible problem here.

"On physical examination, she was found to have a 'markedly' enlarged liver and spleen. Significantly absent is any description of skin changes other than ulceration; that is, no apparent icterus, rashes, or petechia. Also, she had no apparent generalized adenopathy and no apparent joint swelling or tenderness. The child was found to be severely anemic with a leukopenia. The possibility of sickle cell disease was ruled out. During the hospitalization, the white blood cell count continued to drop, eventually down to 1,050, and a relative lymphocytosis became apparent. The platelet count dropped significantly from 258,000 down to 60,000. Despite small transfusions of blood and parenteral iron, she remained rather markedly anemic. She had a persistent daily temperature elevation.

"In making a differential diagnosis, I have attempted to make two or three classifications which I believe to be most significant; that is, to consider this child's illness with reference to possible blood dyscrasias, certain lipid storage diseases, and certainly to consider the several infectious processes which might account for her serious illness.

### BLOOD DYSCRASIAS

"We will first consider blood dyscrasias. There are certainly some findings in this child to suggest the possibility of leukemia; however, there are also others which would lead one to believe that we are not dealing with this fatal disease. We have noted the leukopenia and it is certainly true that over 65 per cent of children with acute leukemia present with a very low white blood count. How-

ever, we must remember that more important than the numbers of leukocytes counted are the morphologic characteristics of the cells themselves. We must look at the marrow and see if there is an overgrowth of abnormal leukopoietic tissue. In leukemia, the megakaryocytes and the erythropoietic precursors are greatly decreased. We must also remember that at times the bone marrow may present the picture of an aplastic anemia without evidence of abnormal leukopoietic tissue in a child who actually has leukemia. This child had no obvious bony changes seen on x-ray which would be suggestive of a leukemic process. That is, there were no osteolytic lesions, no areas of osteosclerosis, no areas of diminished density across the metaphyseal ends of the long bones, and no subperiosteal new bone formation.

### LEUKEMIA SUGGESTED

"Some of the clinical findings in this child might suggest leukemia—specifically the fever, weight loss, liver and spleen enlargement. The lymph nodes in a child with leukemia may not be enlarged at all, and often are not greatly enlarged. Skin infections are common. We do not have evidence here of a hemorrhagic tendency, and there is no description of petechia, purpura, or ecchy, moses. Lastly and most significantly, leukemic cells were not seen on examination of the peripheral smear or in the bone marrow in this child.

"Let us now consider the anemias. The hemoglobin electrophoresis showed an AC hemoglobin. Hemoglobin-C appears in the heterozygous state in about 1 per cent of American Negroes and these usually present with a mild anemia and a splenomegaly. In the homozygous hemoglobin-C disease, the anemia may be much more severe, of course. In this child, however, with the absence of hemoglobin-S, and with the hemoglobin-C in the heterozygous state, I could not attribute her problem to this alone.

"Does this child have a congenital hypoplastic anemia? This type of anemia becomes manifest usually around two or three months of age. The production of leukocytes in congenital hypoplastic anemia is usually normal, and there is usually no enlargement of the spleen, liver, or peripheral lymph nodes. In this malady, the bone marrow would show a severe decrease in the erythrocyte precursors.

"We should also consider the possibility of an aplastic anemia in this child; that is, an aplastic

anemia due to one of the many causes. Does she have a congenital aplastic anemia? Or one due to drugs or other chemical agents such as chloramphenicol, sulfonamides, and hydrocarbons? We also should consider aplastic anemias with reference to irradiation, due to infection, and the myelophthisic aplastic anemia. In any of these, the anemia is usually a normocytic, normochromic type. The platelet count appears low early in the course of the disease and the reticulocytes are reduced. We do not have evidence in this child of the typical bone marrow change showing fatty and fibrous tissue with only small clusters of hemopoietic cells.

### HODGKIN'S RULED OUT

"Hodgkin's disease is quite rare in infants, becoming much more frequent after eight years of age. This child did not have noticeable enlargement of the superficial lymph nodes, and there was no apparent change of the mediastinum on the chest film. I could not relate her problem to Hodgkin's disease.

"There is one syndrome which is quite difficult to diagnose and can only be diagnosed after the other conditions have been excluded which might account for anemia, leukopenia, thrombocytopenia, and splenomegaly in a child. This is Banti's syndrome or splenoportal hypertension. Banti described this back in 1893, and we now feel that probably the most common cause of the congestive splenomegaly in children is extrahepatic vascular obstruction which is usually inflammatory, involving the portal or the splenic vein or both. We certainly should consider this, especially in any child who has had an exchange transfusion shortly following birth because of the possibility of a thrombophlebitis developing after an omphalitis or generalized infection.

### STORAGE DISEASES

"The lipidoses or lipid storage diseases should be mentioned in the differential diagnosis, but since no cells were found in the bone marrow suggestive of these illnesses we will not dwell on them at length.

"In the acute or infantile form of Gaucher's disease, the symptoms usually are seen at an early age. There is usually a moderate hepatosplenomegaly, slow development of the child, certain signs of bulbar palsy, strabismus, retroflexion of the head, and the respiratory problems which develop. The life expectancy of these children is usually under one year. The characteristic



Gaucher cells typically seen in the bone marrow are necessary for the diagnosis.

"In Niemann-Pick disease, there are several different clinical patterns, hepatosplenomegaly occurring early, with additional motor and intellectual problems developing later in infancy. There is a great frequency of macular degeneration in this process. It is somewhat more difficult to find the vacuolated foam cells in the marrow but they also are diagnostic.

## INFECTIONS

"We will now consider the possibilities of various infections in this child. Very obviously in the protocol we are presented with the fact that this child was bitten by a rat on the left thigh at four months of age. There are two distinct diseases which are directly associated with the bite of an infected rat. Sodoku, the classical form of rat bite fever, is caused by the *Spirillum minus*. The *Streptobacillus moniliformis* results in Haverhill fever, the other disease.

"In rat bite fever, clinically, there is usually an initial healing of the bite wound followed in a few weeks by painful swelling in the development of a chancre-like ulcer at the site, with regional lymphadenopathy. There may be a sudden spike in the temperature up to 105 degrees and an appearance of the characteristic rash consisting of raised, bluish-red macules. The temperature and the local lesions may subside or become less painful in three or four days with a clearing of the eruption, to be followed by an afebrile period and then a recurrence of the symptoms. The fever may recur intermittently for several months. These children have an elevated white count associated with each period of temperature elevation. There is almost always a prompt response to penicillin therapy.

"Haverhill fever is associated with arthritis in addition to other symptoms. There may be involvement of the large and small joints with redness, swelling, tenderness at the time of the temperature elevation. Again, treatment with penicillin usually produces a rapid cure. I could not associate this child's illness with either of these two disease processes.

## TUBERCULOSIS POSSIBLE

"This child certainly could have had acute primary tuberculosis. We see this much more commonly in infants than in older children, and the generalized involvement of various organs may produce many symptoms. In this child, there was no apparent change on the chest x-ray. How-

ever, we must consider that with acute miliary or primary tuberculosis in a child the changes may come later in the disease process. They certainly can have the high spiking temperature elevation with enlargement of the spleen and the development of leukopenia. Although this child's PPD skin test was negative, we must also consider that either in an overwhelming infection, or during the first few weeks after the introduction of the tubercle bacilli in the body, the PPD skin test need not be positive. This child was not as extremely ill as one would probably expect a child to be with acute miliary tuberculosis. If these children go untreated, their demise usually comes within a very short period of time, four weeks in some cases.

"Brucellosis should be considered in the differential diagnosis although this occurs with relative infrequency in infants and small children. There is no really typical pattern of this disease in a small child except for the undulating fever. The common problem of bone and joint involvement was not seen in this child. The liver and spleen may be enlarged, however, and again there may be an anemia and a leukopenia. This child had a negative agglutination test for Brucella. Again, however, we must consider that in a small percentage of patients with brucellosis agglutination may not be demonstrable until late in the convalescent period or on occasion not at all.

## OTHER INFECTIONS NOTED

"There are two other infectious processes which I would like to mention although I do not believe the child had either of these. The first is that of congenital syphilis. We do not have presented in this child the common symptoms of rhinitis (snuffles), the maculopapular skin eruptions, the pseudo-paralysis, and the moist lesions around the mouth, anus, and genitalia. On x-ray, there was no evidence of the characteristic osteochondritis. The child did have the anemia and hepatosplenomegaly which are commonly found with congenital syphilis. The usual jaundice was not noted.

"I will only mention malaria in the differential diagnosis because of the fact that this child had an enlarged spleen and had temperature elevation. The likelihood of this occurring in our locality now is remote. The temperature pattern and the clinical picture we have presented here is not characteristic of this disease.

"We live in an area of the United States in which *Histoplasma capsulatum* results in disease in man much more frequently than in certain

other areas. In that area, bounded by the Appalachian slope on the east and by the tributaries of the Mississippi, Missouri, and Ohio rivers on the west and coming south from this area is the territory to which I refer. We are still not completely sure as to how the histoplasma organism gets into the human body, that is, through the respiratory tract, the gastrointestinal tract, or through the skin. The progressive form of histoplasmosis is most commonly seen in older, chronically ill persons and in the very young infant or child.

"As has been noted, the disease in the progressive form has usually reached quite an advanced stage before it is detected. To quote from Dr. Amos Christie of Vanderbilt:

A child might have been ill for one or two months with sickness and with increased irritability and fever. A number of the cases at the outset have recurrent or resistant diarrhea. . . . There will be a weight loss or a failure to gain weight, and the child will become progressively paler until enlargement of the abdomen is noted. This is due to the marked enlargement of the liver and particularly of the spleen. The child will be irritable, apathetic, and quite pale. The temperature is irregular, with daily elevations to 101-103°. As a rule, there is no enlargement of the peripheral lymph nodes unless this adenopathy is regional and secondary to an ulcerative skin lesion.

"With progressive disseminated histoplasmosis the child is most often found to have a progressive hypochromic anemia and a leukopenia with a relative lymphocytosis. With the finding of a pancytopenia, one might think of an aleukemic phase of leukemia. Platelets become reduced late in the course of the disease. With reference to the histoplasmin skin test, these children with the progressive form of the disease will frequently fail to react.

"This patient had pyrexia, anemia, hepatosplenomegaly, leukopenia, skin ulcerations, and a failure to thrive. There was a precipitous drop in the white cell count with a relative lymphocytosis and a significant drop in the platelet count late in the illness.

"In final summary, we have reviewed various disease processes which might account for this child's serious illness including blood dyscrasias, lipid storage diseases, and infectious processes.

"I believe that this child had the severe, progressive form of histoplasmosis and that identification of the parasites was made either in a peripheral blood smear or in the bone marrow. My

diagnosis is, therefore, disseminated histoplasmosis."

## PATHOLOGIC DISCUSSION

Dr. William B. Wilson: "The diagnosis was established by a repeat bone marrow aspiration, by which an adequate sample was obtained. The findings on smear were essentially similar to those described in the protocol in that no organisms were demonstrable on Wright's stain. However, in the cell block, macrophages containing the typical yeast forms of *Histoplasma capsulatum* were demonstrated on H&E stain, and were confirmed by Gomorri stain. They were also subsequently demonstrated by Giemsa stain on the bone marrow smear. Subsequently, *Histoplasma capsulatum* was grown from the bone marrow and a blood culture. The histoplasma complement fixation test (yeast phase) was 1:8 in titer.

"The patient was transferred to the University Hospital where she was treated with Amphotericin B, and triple sulfa. However, she had persistent and increasing pancytopenia, and persistent anemia which again was never elevated over about 6 gm. per cent despite adequate transfusion therapy. The chest x-rays showed a possible soft infiltrate in the right upper lobe. The spleen continued to enlarge. The patient died quietly two weeks after admission.

## AUTOPSY FINDINGS

"At autopsy, performed at the University Hospital by Dr. Allen M. Read, the liver was enlarged 1.5 times normal and the spleen 7 times normal. Microscopically, the unit lesion in this case appeared to be a marked reticulum cell hyperplasia, similar to that observed antemortem in the bone marrow. Large mononuclear phagocytes were found distributed throughout the lymph nodes, thymus, spleen, liver, and lungs, many of which were distended with *Histoplasma capsulatum* organisms. The hyperplasia of the reticuloendothelial cells, with extensive phagocytosis of huge numbers of organisms, undoubtedly represents a major defensive response of this patient to the overwhelming invasion by the fungus. Strikingly, although reticuloendothelial cells were markedly hyperplastic within the liver and spleen, they did not contain demonstrable, phagocytosed fungi, even after special staining. This is not an uncommon paradox in fatal childhood histoplasmosis. I have no explanation for this, except possibly the effect of the chemotherapy. However, fungus organisms were readily demonstrable in the organs mentioned, and large numbers of organisms were seen on the mucosa



of the large and small bowel. In addition, there was a large ulcer of the duodenum, containing histoplasma and candida organisms, the latter probably representing merely an opportunistic invader.

"Practically no granuloma formation was found in any of the organs involved, suggesting poor resistance on the part of the host to the overwhelming infection. The large number of organisms in the GI tract, as well as the duodenal ulceration probably due to histoplasmosis, supports the thesis that the GI tract is the usual portal of entry of overwhelming histoplasmosis in infants and children. These findings may also account for her repeated abdominal distention. One wonders if a stool culture might not have demonstrated the organism.

"The failure of the hemoglobin to rise above 6 gm. per cent despite adequate transfusion therapy must be attributed, in part at least, to hemolysis by the huge spleen (nonspecific 'hypersplenism'). There was probably some GI blood loss from the duodenal ulcer, also, although this was never proven, and undoubtedly there was a myelophthisic factor involved in her anemia, as evidenced by the pancytopenia. The pathologic diagnosis was disseminated histoplasmosis."

#### GENERAL DISCUSSION

*Dr. Wilson:* "This patient was admitted on the orthopedic service because of suspected osteomyelitis, and was under the care of Dr. Buford Yerger, orthopedic resident, Dr. Louis Farber, and Dr. Joseph Miller, pediatric consultant."

*Physician:* "Could this patient have been saved if the diagnosis had been established earlier?"

*Dr. Owen:* "This is problematical. She was probably beyond help at the time of admission. She developed the draining thigh abscesses three weeks prior to admission, and probably had been sick for a month or two before that with her basic disease."

*Physician:* "What relation did the thigh abscesses bear to this patient's histoplasmosis?"

*Dr. Wilson:* "Ante-mortem culture of the thigh abscesses yielded a nonspecific mixed flora, dominated by *Proteus*, which hampered further attempts at separation. No evidence of histoplasma infection of the thigh abscesses directly was dem-

onstrated, and the abscesses healed during the patient's antibiotic therapy, whereas, of course, the disseminated histoplasmosis did not respond to any therapy. The development of the thigh abscesses is felt to represent a manifestation of lowered resistance generally."

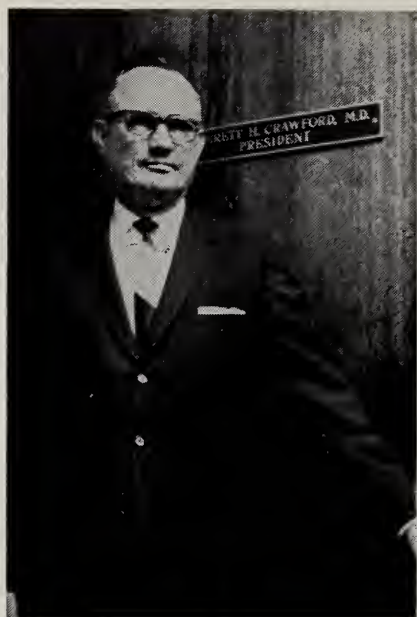
*Dr. Guy Gillespie:* "I was impressed by the degree of enlargement of the spleen in this case. This splenomegaly along with some elevation of the reticulocyte count and presence of immature red blood cells in the peripheral blood thus suggests a possibility that there was some element of hemolytic anemia. It also appears, from the bone marrow report, that there was a predominance of erythrocytic tissue to account for most of the cells seen in the marrow. This would be consistent with stimulation of the erythrocytic elements in the marrow.

#### THALASSEMIA VARIANTS

"While these findings are often present in cases of hemoglobin-C disease of the homozygous type, I do not think that the heterozygous condition which was present in this patient could account for these findings. However, there is a possibility that the patient might have a combination of thalassemia and hemoglobin-C disease. There are apparently many more patients in our Mississippi population with minor variations of thalassemia than we have previously suspected, as shown by the screening studies of Dr. Robert Thompson at the University of Mississippi Medical Center. The abnormal hemoglobin which is present in this type of disease is a variant of hemoglobin-A and is designated as hemoglobin-A<sub>2</sub>. It is not detected on routine paper electrophoresis of the hemoglobin but requires special techniques using a starch gel or block.

"The severe morphologic changes which were noted in the red blood cells would offer further support for this possibility of some type of thalassemia in combination with hemoglobin-C, since we have observed morphologic changes of this type in other patients with this condition. This diagnosis, of course, would probably be entirely coincidental to, and not directly related to, the primary diagnosis, which appears to be histoplasmosis. ★★★

1190 North State Street



# The President Speaking

## 'A New Interprofessional Spirit'

EVERETT CRAWFORD, M.D.

Tylertown, Mississippi

THE PREOCCUPATION of professional people under daily pressures of private practice sometimes makes them appear self-centered and uninterested. Too often, we physicians find ourselves subjected to working days of 15 hours with little enough time for our families, let alone our colleagues. When a moment of leisure is possible, we have a priority of nonmedical things on our respective agenda. All of this seems to be part of being a physician.

The fraternity of healing extends into two other major fields, for there are only three classifications of scientific practitioners: physicians, dentists, and veterinarians. While there are more than twice as many doctors of medicine as there are doctors of dental surgery and of veterinary medicine, we sorely need to increase communication among the three groups. As with their medical friends, the dentists are also preoccupied, and the veterinarian finds himself in a totally different sort of clinical environment from his physician and dentist colleagues.

Perhaps we lose sight of the substantial contribution which veterinarians are making in the biomedical fields, in their concern for controlling disease which is transmissible from animal to man, and for their supervision and inspection of fiber for human consumption. By no means is the sum total of their professional endeavor confined to small and large animal practices.

The day may not be far distant when we can enjoy and profit from formal interprofessional occasions, sharing knowledge in the interest of better health. In the meanwhile, let us physicians initiate cordial and continuing relations at the community level with our professional colleagues in dentistry and veterinary medicine as a beginning step. All we have to gain is better health service supported by a new and viable interprofessional spirit of common purpose. ★★★





## Teenage Health Education: Youth's Achilles' Heel

### I

AMERICA'S TEENAGERS are an astonishing lot. They demonstrate high initiative, generally do well in the learning process, and are versatile beyond belief. By no stretch of the imagination are they all dropouts, delinquents, nor do they all go about with shoulder-length hair and rock 'n roll guitars. And as with any age group, the teenagers have their long and short suits, their strong and weak points. One of the latter ought to concern parents and physicians, because it is an apparent deficiency in health education.

A national study of health instruction in the public schools sponsored by the Samuel Bronfman Foundation has turned up some interesting findings. It was a responsible and credible study to which the American Medical Association was an active party, and it was chaired by the distinguished former New York commissioner of public health, Dr. Herman E. Hilleboe. Findings have been privately published in permanent book form by the Foundation.

There were good and valid reasons for undertaking this research project, because the health and well-being of the nation's youngsters are among our most priceless resources. For example, venereal disease infects 250,000 young people between the ages of 15 and 19 each year; more than one out of three high school seniors smoke;

and a majority of teenagers will have experimented with alcoholic beverages before graduation from high school. Today, more girls marry in their 18th year of life than in any other, and more have their first child in their 19th year. Forty per cent of all unwed mothers are between the ages of 15 and 19, and illegitimacy is on the increase.

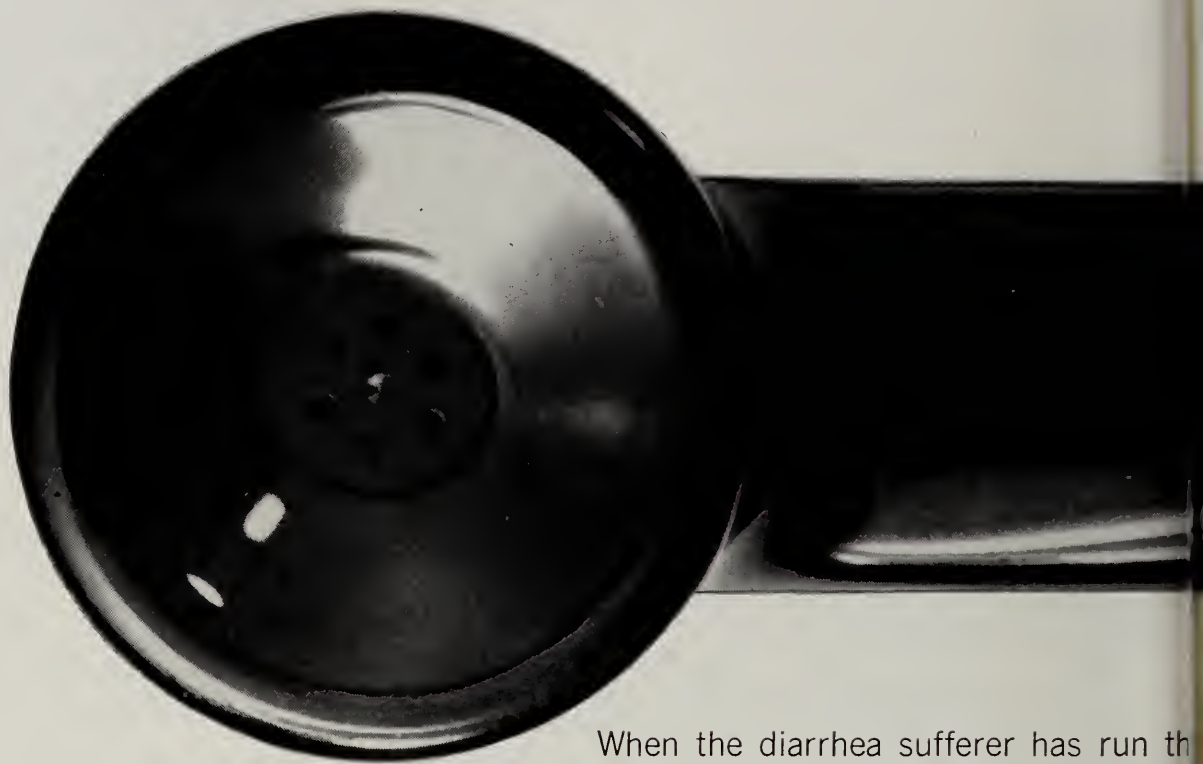
Although these gloomy statistics relate on the whole to a minority of teenagers, they are sufficiently serious to warrant a hard look at health education which is exactly what the Bronfman Foundation did.

### II

The experts define health education as a tri-dimensional concept where each dimension is a triad: Health as a unity of man's physical, mental, and social well-being; health behavior as knowledge, attitudes, and practices; and the focus of health education as the individual, the family, and the community.

Oberteuffer writes that there is a definable relationship between health and health education which makes the contribution of each an absolute necessity to the effective development of the other. Reduced to simple terms, he is saying that one needs abundant good health to make full use of the education. In effect, it was within this frame of reference that the school health education study

# When uncontrolled diarrhea brings a call for help



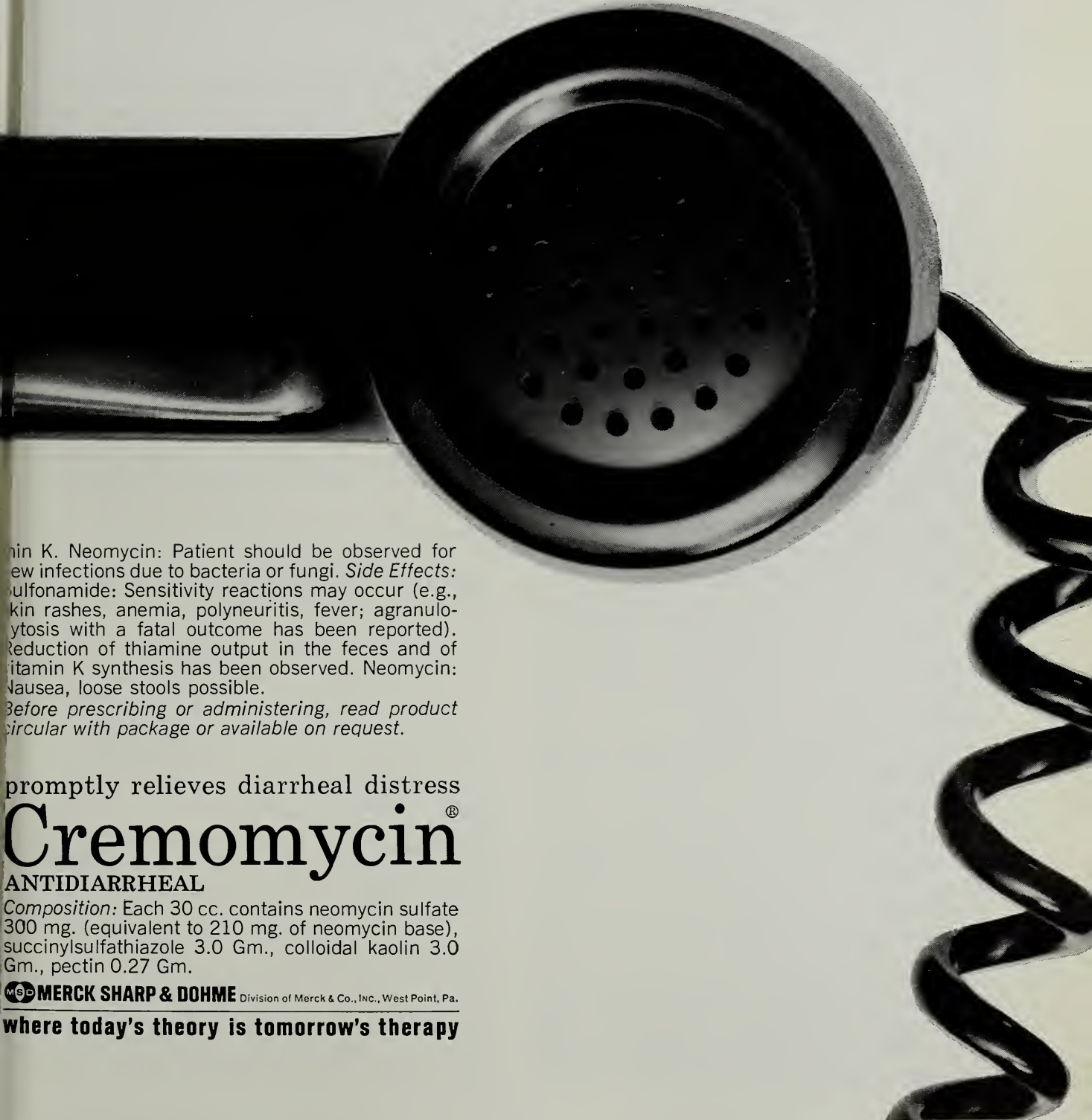
When the diarrhea sufferer has run the gamut of home remedies without success, pleasant-tasting CREMOMYCIN can answer the call for help. It can be counted on to consolidate fluid stools, soothe intestinal inflammation, inhibit enteric pathogens and detoxify putrefactive materials—usually within a few hours.

CREMOMYCIN combines the bacteriostatic agents, succinylsulfathiazole and neomycin, with the adsorbent and protective demulcents, kaolin and pectin, for comprehensive control of diarrhea.

*Indications:* Diarrhea. *Contraindications:* Kaolin. Withhold if diverticulosis is present or suspected. *Precautions:* Sulfonamide: Continued use requires supplementary administration of thiamine and vitamins.



your R<sub>x</sub> for  
Cremomycin  
can provide relief



min K. Neomycin: Patient should be observed for  
new infections due to bacteria or fungi. *Side Effects:*  
sulfonamide: Sensitivity reactions may occur (e.g.,  
skin rashes, anemia, polyneuritis, fever; agranulo-  
cytosis with a fatal outcome has been reported).  
Reduction of thiamine output in the feces and of  
vitamin K synthesis has been observed. Neomycin:  
Nausea, loose stools possible.

*Before prescribing or administering, read product  
circular with package or available on request.*

promptly relieves diarrheal distress

# Cremomycin<sup>®</sup>

ANTIDIARRHEAL

*Composition:* Each 30 cc. contains neomycin sulfate  
300 mg. (equivalent to 210 mg. of neomycin base),  
succinylsulfathiazole 3.0 Gm., colloidal kaolin 3.0  
Gm., pectin 0.27 Gm.

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where today's theory is tomorrow's therapy

aimed its inquiries at the relationship where it logically should be in a state of optimum development: Among the healthiest segment of the population while they are actively engaged in the learning process.

Good health means more than the negative notion of freedom from disease. Ideally, it is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. The health education authorities say that their efforts are directed toward the goal of the highest attainable level of health for each individual. Just how close the goal can be approached is the final measure of success. The study findings indicate that we could do much better.

## III

Typical responses from teenage samples reflect serious misconceptions in health behavior which has been defined as knowledge, attitudes, and practices. Consider these findings about personal health beliefs and attitudes:

—Commercial medicines are safe to purchase if the label clearly indicates the dose and contents or if recommended by a pharmacist.

—The use of pep pills and sleeping medications requires no medical supervision.

—Although increasing today, venereal disease has never been a major social problem.

—Physical fitness and endurance naturally increase as adolescents grow up.

—For a specific health problem, the source of help selected as best by high school seniors was: For a persistent skin inflammation, a pharmacist; for a painful back injury, a chiropractor.

There were notable misconceptions about public health and related endeavors:

—A full-time public health department provides complete diagnosis and treatment for any citizen.

—The purpose of fluoridating water supplies is to purify water and make it safe to drink.

—Existing legislation guarantees the reliability of any advertised medicine.

—The World Health Organization is part of the International Red Cross.

Of all students queried in the 6th, 9th, and 12th grades, girls consistently scored better than boys. The strongest points—and, hence, the highest level of health education—were in cleanliness and body care, nutrition, and sleep, exercise, and re-

laxation. Dental health and safety education were consistently the weakest areas.

## IV

The Bronfman Foundation wisely concedes that “in this increasingly complex 20th century, knowledge is growing at an unprecedented rate. One person cannot learn all there is to know, and one school cannot teach all there is to learn. . . .” The plan for remedial action suggests the establishment of priorities in education as a practical approach.

Health education programs in the public schools, the Foundation believes, are in sore need of critical review. Moreover, the investigators say that curriculum improvement cannot be achieved by introduction of crash programs or on a patchwork basis. They reason that what may appear on the surface as obvious and compelling problems can’t be resolved by temporary or superficial attention.

That the United States has the best medical care in the world is no warranty that it will always be the healthiest nation on the globe. Medicine is in the main curative, whereas sound health education is preventive. Here is the happy formula for good health, and it must begin in America’s young people.—R.B.K.



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*“It’s probably a price-fixing session.”*



# The Most Despicable Game of All

"Physicians, as conservators of the public health, are bound to bear emphatic testimony against quackery in all its forms."

This is a *verbatim* quote from the proceedings of the Philadelphia meeting of the American Medical Association—not the December 1965 Philadelphia meeting, but the organizational meeting conducted there in May of 1847. Since its initial organization, American medicine has been dedicated to the proposition of honest healing, and it is fervently dedicated to waging war without mercy against fraud and deception practiced by the quack.

AMA points out that the health quack isn't easy to spot these days. The medicine show, the professor in the stovepipe hat, the kerosene lanterns, and the Indian chief are gone. The magic elixir of yesteryear now has a fancy name—and a big price—but it is just as worthless as the snake oil peddled at the crossroads to grandpa.

The merchants of menace, preying upon the nation's health and pocketbook, are more insidious and unscrupulous than ever. They promote worthless products, food fads, phony cosmetics, and every sort of nostrum which the human mind can devise. They make extensive use of legitimate medical devices, for example, x-ray, and adjust away at the human spine as a panacea for everything from diabetes to mental illness. Annually, they bilk the uninformed, the desperate, the unsuspecting, and, astonishingly, the intelligent, too, of millions of dollars. But the toll is far more serious than the needless loss of money, because the principal tragedy is the toll of human health.

In 1964, the Mississippi State Medical Association sponsored a Congress on Health Quackery, subsequently publishing the papers in the *JOURNAL*. AMA, in partnership with interested agencies of the United States government, has sponsored two such congresses nationally. But despite this unmasking of the quack, he still flourishes and preys upon the health of the nation in the most despicable game of all.

At this moment, chiropractors are seeking the badge of legality and respectability in the 1966 Regular Session of the Mississippi Legislature. In many areas of the state, there may be found the sellers of phony drugs and devices. The physician has willingly and eagerly accepted his responsi-

bility to oppose quackery, and the public must be similarly motivated in its own interest.

Dr. John G. Archer of Greenville, 1964 president of the association, summed it up quite well when he said: "Let us work without ceasing toward the day when the last predator upon human misery has finally been assigned to the hottest fire in hell, reserved for one whose goal in life is to deceive and defraud. Then—and only then—will we be secure from those who would harm us in the cloak of the false healer."—R.B.K.

## A Measure of Wisdom or a Measure of Haste?

The Food and Drug Administration lost little time in doing exactly what the Pharmaceutical Manufacturers Association warned against during hearings on H.R. 2, the measure initially designed to clamp tighter controls over the amphetamines and barbiturates and subsequently enacted into the Drug Control Amendments of 1965. FDA now proposes to extend iron-fisted controls over a broad segment of the ataractic agents and sedatives.

Prominently named in the extension of the newly granted controls are meprobamate (Miltown, Wallace), chlordiazepoxide HCl (Librium, Roche), diazepam (Valium, Roche), methypyrilone (Noludar, Roche), ethinamate (Valmid, Lilly), and glutethimide (Doriden, Ciba). Not overlooked in the extension are ancient chloral hydrate and paraldehyde.

Chief argument of the FDA in seeking extension of the controls are that these drugs "have a potential for abuse." This is quite true, but it is also true that no drug has ever been made or ever will be made which does not have exactly the same potential. It can easily be demonstrated that there are considerably many more violent episodes related to overdosing of aspirin—or even deaths—than can be attributed to the prescription drugs over which FDA is so seriously concerned.

Nobody questions for a minute the real and substantial consequences which inevitably result from the excessive or intemperate use of these or other drugs. This, however, should not be the central issue in the early application of the law. The last thing in the world that the Pharmaceutical Manufacturers Association or any of its member companies wants is the wrongful use of drugs. They are, on the other hand, seriously and properly concerned with maintaining a continuing

to help relieve pain  
in common  
anorectal disorders

# “non-caine” Diothane<sup>®</sup>

Diothane—with its chemically distinct “non-caine” anesthetic agent diperodon — provides effective temporary topical anesthetic and emollient actions for soothing relief of anorectal pain. Anesthetic activity is effective and relatively prolonged; sensitization is infrequent. Reports to Merrell on 1,500 patients treated pre- and postoperatively with Diothane Ointment, indicate only 22 developed local skin reactions. Reactions to Diothane have been burning or stinging sensations and a few cases of allergic manifestations. An additional advantage: Diothane Ointment and Suppositories are mildly antiseptic. Prescribe or recommend either form...both are now available.

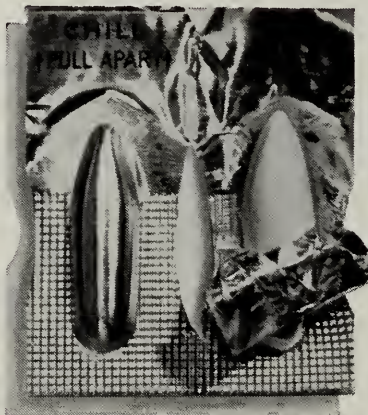
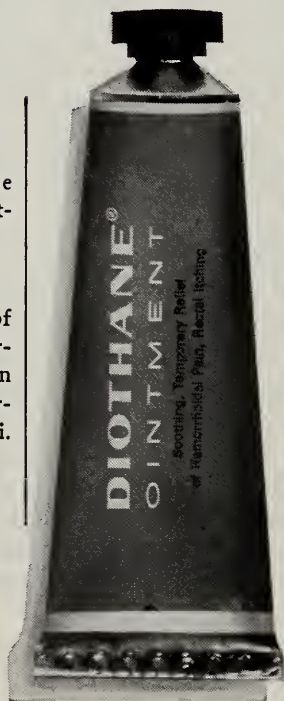
## DIOTHANE OINTMENT

### COMPOSITION:

diperodon 1.0%; oxyquinoline benzoate 0.1% in a special ointment base.

### INDICATIONS:

Provides temporary palliation of pain that may result from hemorrhoidectomy and from common anorectal disorders such as hemorrhoids, anal fissures, pruritus ani.



## DIOTHANE SUPPOSITORIES

### COMPOSITION:

Each suppository, weighing approximately 2.6 Gm., contains diperodon 1.0%; urea 10.0%; oxyquinoline benzoate 0.1% in a special hydrophilic suppository base. A unique shape keeps the suppository in intimate contact with mucous membranes.

### INDICATIONS:

Provide for temporary palliation of pain caused by hemorrhoids and pruritus ani.

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**BACTERIAL  
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**BRING THE TREATMENT TOGETHER  
IN A SINGLE PRESCRIPTION**

**ACHROCIDIN<sup>®</sup>**  
Tetracycline HCl-Antihistamine-Analgesic Compound

Each tablet contains:

ACHROMYCIN<sup>®</sup> Tetracycline HCl . . . 125 mg  
Acetophenetidin (Phenacetin) . . . . 120 mg

Caffeine . . . . . 30 mg  
Salicylamide . . . . . 150 mg  
Chlorothen Citrate . . . . . 25 mg

Effective in controlling complicating tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects include drowsiness, slight gastric distress, anorexia, overgrowth of nonsusceptible organisms, tooth discoloration (if given during tooth formation), photodynamic reaction to sunlight and increased intracranial pressure (in young infants). Average adult dosage: 2 tablets four times daily, given at least one hour before, or two hours after meals. Patient should avoid direct exposure to artificial or natural sunlight; and should not drive a car or operate machinery while on drug. Reduce dosage in impaired renal function. Stop drug immediately at the first sign of adverse reaction.

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## EDITORIALS / Continued

flow of drug products through ethical channels of distribution in a stable market environment for legitimate, physician-supervised use.

The nation's drugmakers have given wholehearted support in controlling prescription drugs so that they may be made available only on a physician's specific orders for use within a framework of his medical judgment. All PMA says now is to go slow and see how the new law works. If FDA fails to give this advice the serious consideration it deserves, many may question whether the pattern of proliferation of new control authorities is a measure of wisdom or a measure of haste.—R.B.K.



## PERSONALS

JOHN G. ALEXANDER of Union has been appointed a member of his local school board. The term of service extends to 1969.

BEN L. CRAWFORD, JR., of Tylertown has been named vice president of the Walthall County Chamber of Commerce. As such, he is also president-elect and will be installed as president in 1967.

JACK B. CAMPBELL has announced the removal of his office to 3170 Highway 80 East in McLaurin Mart between Jackson and Brandon. His practice is limited to general surgery.

NOLLIE C. FELTS, JR., of Hattiesburg has earned the Life Master's rating during the recent Mid-South Regional Bridge Tournament at Jackson. More than 1,000 expert participants played in the tourney.

WILLIAM D. FITZGERALD, formerly of Cleveland, has been appointed director of Student Health Services at the University of Idaho at Moscow. He assumed his duties there on February 1. Dr. Fitzgerald practiced in Ruleville and Cleveland for 17 years.

JOE L. GUYTON of Pontotoc has been named a member of the Board of Trustees of the Pontotoc Community Hospital by the Board of Super-

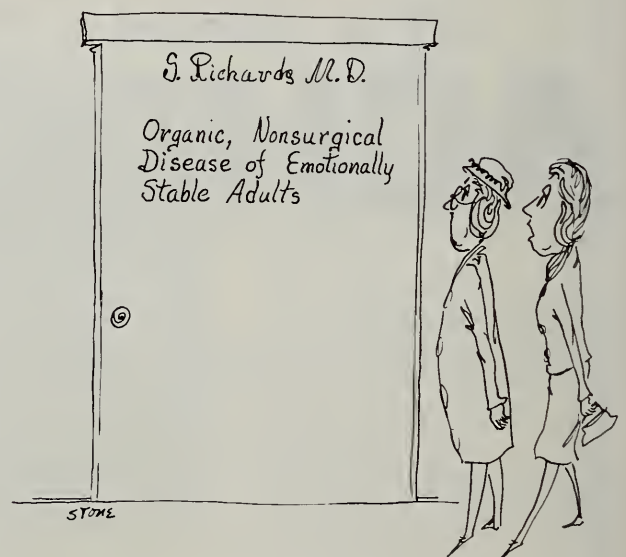
visors. Dr. Guyton was president of the Northeast Mississippi Medical Society in 1954 and vice president of the Mississippi State Medical Association in 1962.

WALTER D. GUNN of Quitman has been elected co-chairman of the Clarke County Heart Association. Mrs. Gunn has been named co-chairman of the Quitman area for the association.

DOUGLAS B. HAYNES, JR., of Clarksdale has received the 1966 Distinguished Service Award from the Clarksdale Junior Chamber of Commerce. The citation for the award referred to his achievements in behalf of the community, state, and medical profession. He is founder and an officer in the Coahoma County Mental Health Association and has assisted in securing both the local mental health center and heart clinic. Dr. Haynes is director of the Coahoma County Health Department and a graduate of the University of Tennessee School of Medicine.

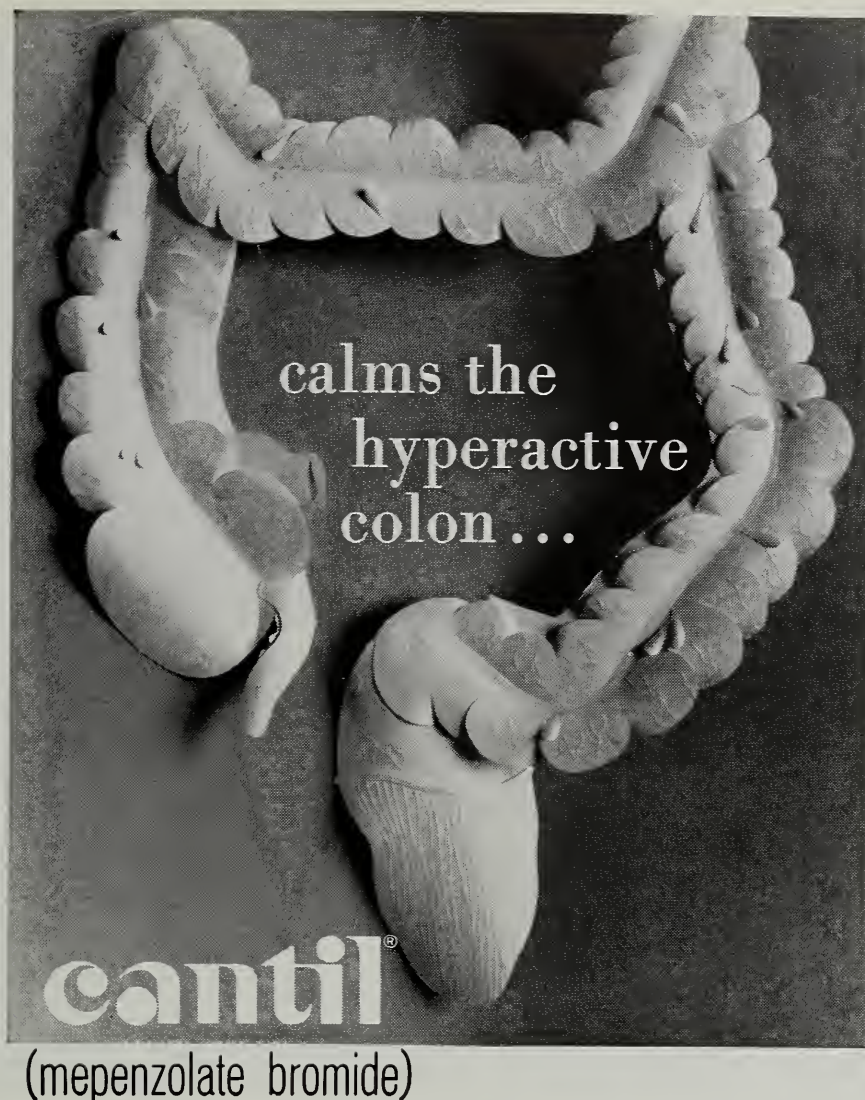
EMMETT M. HERRING, JR., of Hattiesburg was elected to the Board of Directors of the Hub City Exchange Club. He currently serves as secretary of the Section on EENT of the state medical association.

S. S. KETY of Picayune has opened new clinic facilities at Juniper Street and Fifth Avenue.



*"They say he's independently wealthy."*





## *helps restore normal motility and tone*

**C**antil (mepenzolate bromide) works in the colon. In irritable colon, spastic colon, ulcerative colitis and other functional and organic colonic disorders, it acts to:

- control diarrhea/constipation
- relieve spasm, cramping, bloating
- make patients more comfortable

with little effect on stomach, bladder or other viscera.

"In 40 of 44 cases of irritable or spastic colon, Cantil [mepenzolate bromide] or Cantil with Phenobarbital reduced or abolished abdominal pain, diarrhea and distention and promoted restoration of normal bowel function . . . Cantil [mepenzolate bromide] proved to be singularly free of anticholinergic side-effects. Blurring of vision or dryness of the mouth were occasionally seen and were usually managed with a reduction in dosage. Urinary retention, noted in two cases was eliminated in one by reducing dosage."<sup>1</sup>

### **IN BRIEF:**

One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

Supplied: CANTIL (mepenzolate bromide)—25 mg. per scored tablet. Bottles of 100 and 250.

CANTIL with PHENOBARBITAL—containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

1-Riese, J.A.: Amer. J. Gastroent. 28:541 (Nov.) 1957



**LAKE SIDE LABORATORIES, INC.**  
Milwaukee, Wisconsin 53201



## NEW MEMBERS

FRED D. KURRUS of Jackson has been awarded a clinical fellowship in surgery at the University of Mississippi School of Medicine. The fellowship is given under the postgraduate program of the American Cancer Society.

ROBERT C. and FRANK C. MASSENGILL of Brookhaven have been recognized for a combined total of 55 years service in the Brookhaven Kiwanis Club. Dr. Robert has been a member for 30 years and Dr. Frank, for 25 years.

JOHN J. PITTMAN of Tylertown has received the Junior Chamber of Commerce Senior Citizen Award for outstanding community service. Dr. Pittman organized the first Little League team in Tylertown, is past president of both the Rotary Club and Chamber of Commerce, and a former member of the Mississippi Agricultural and Industrial Board.

JOSEPH H. SHOEMAKER of Okolona has been elected president of the Okolona Chamber of Commerce. The new president-elect is JOHN E. HARRIS, also of Okolona. The chamber, headed for the first time by a leadership team of two physicians, is actively sponsoring industry-location and municipal improvement programs.

LUTHER D. TURNER of Crystal Springs is the recipient of the 1966 Junior Chamber of Commerce Senior Citizen Award. He is past president of the Crystal Springs Chamber of Commerce and of the professional staff at Hardy Wilson Memorial Hospital.

JOE W. WALKER of Brandon has joined the staff of the Brandon Clinic in association with RICHARD E. SCHUSTER, CURTIS D. ROBERTS, and ROBERT A. RAINES.

BUFORD YERGER, JR., of Jackson has become associated with the Jackson Bone and Joint Clinic at 727 Carlisle St. His practice, as is the case with other clinic members, is limited to orthopaedic surgery.

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

BRITTON, ALBERT BAZAAR, JR., Jackson. Born Enterprise, Miss., Jan. 17, 1922; M.D., Howard University College of Medicine, Washington, D. C., 1947; interned Freedmen's Hospital, Washington, D. C., one year; ob-gyn residency, Flint Goodridge Hospital, New Orleans, La.; elected Jan. 4, 1966, by Central Medical Society.

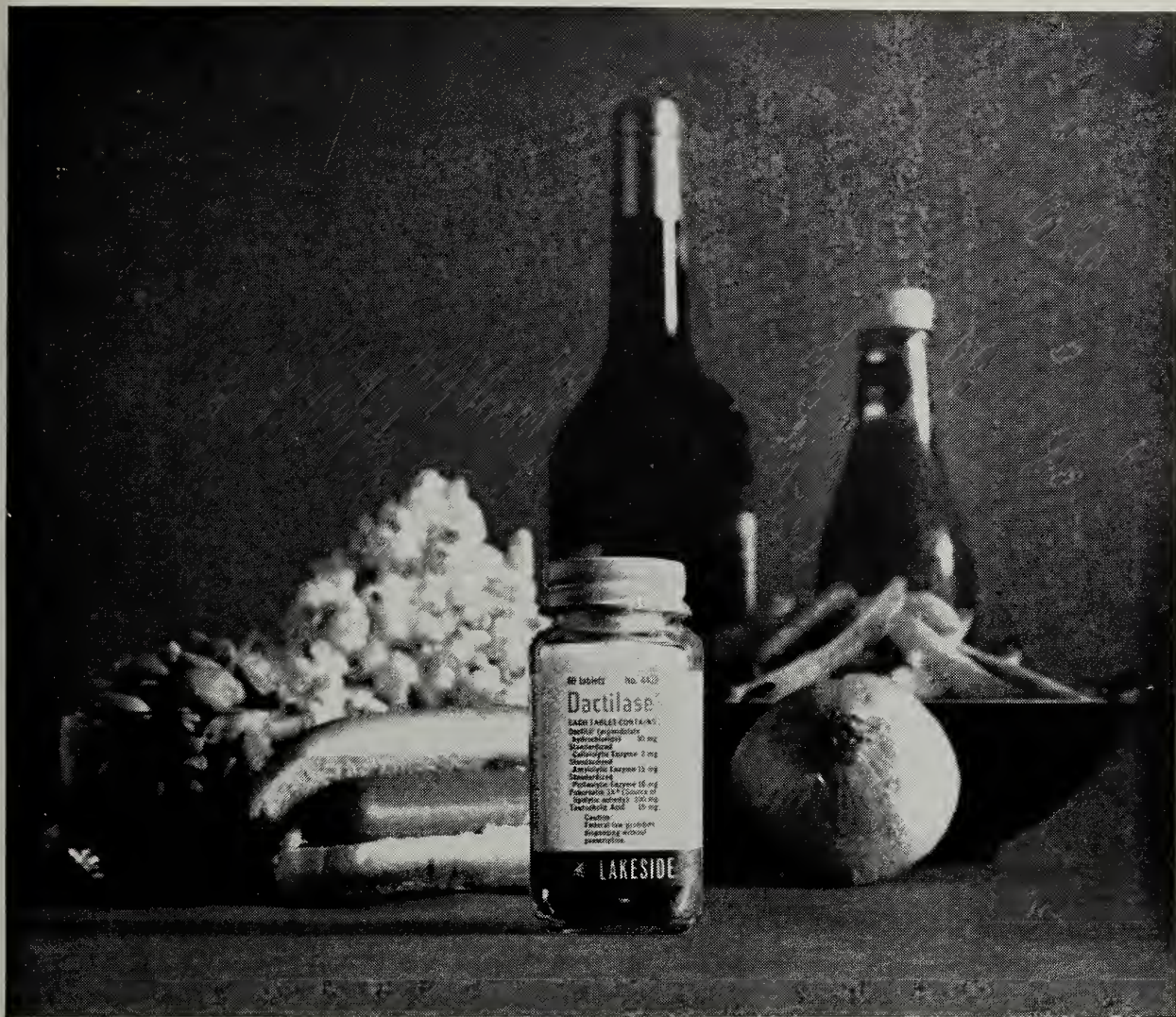
HOLLINGSHEAD, CHARLES AARON, Picayune. Born Laurel, Miss., Aug. 4, 1935; M.D., University of Mississippi School of Medicine, Jackson, 1964; interned Mobile General Hospital, Ala., one year; elected Sept. 13, 1965, by Pearl River County Medical Society.

MAYFIELD, JAMES ROBERT, Carthage. Born Lumberton, N. C., Sept. 14, 1937; M.D., University of Mississippi School of Medicine, Jackson, 1962; interned Wilford Hall Air Force Hospital, San Antonio, Tex., one year; captain, U. S. Air Force; elected Jan. 4, 1966, by Central Medical Society.

SAMSON, ROLAND FRANCIS, Jackson. Born New Orleans, La., Jan. 20, 1934; M.D., Louisiana State University School of Medicine, New Orleans, 1958; interned Milwaukee County General Hospital, Wisc., one year; residency, Charity Hospital of Louisiana, New Orleans, four years; member, College of American Pathologists, the American Society of Clinical Pathologists, and the Society of Nuclear Medicine; certified by the American Board of Pathology; elected Jan. 4, 1966, by Central Medical Society.

STURGIS, GEORGE MADISON, Jackson. Born Baton Rouge, La., April 15, 1932; M.D., Louisiana State University School of Medicine, New Orleans, 1958; interned Charity Hospital of Louisiana, New Orleans, one year; residency, Charity Hospital of Louisiana, New Orleans, four years; member, College of American Pathologists, and the American Society of Clinical Pathologists; certified by the American Board of Pathology; elected Jan. 4, 1966, by Central Medical Society.





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Dactilase provides comprehensive therapy for a wide range of digestive disorders. Its antispasmodic and anesthetic actions rapidly relieve pain and spasm. Dactilase decreases hypermotility without inducing stasis. In addition, it supplies digestive enzymes to help reduce bloating, belching and flatulence. Dactilase does not interfere with normal digestive secretions. Very often it can be a most useful answer to the dyspeptic's needs.

**DACTILASE:** Each tablet contains: Dactil® (piperidolate hydrochloride), 50 mg.; Standardized cellulolytic\* enzyme, 2 mg.; Standardized amylo-

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**Side Effects and Contraindications:** DACTILASE is almost entirely free of side effects. However, it should be withheld in glaucoma and in jaundice due to complete biliary obstruction.

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## Book Reviews

**Fracture Problems: Problem Cases from Fracture Grand Rounds at the Massachusetts General Hospital.** By William H. Harris, M.D., Clinical Associate in Orthopedic Surgery, Harvard Medical School; William N. Jones, M.D., Instructor in Orthopedic Surgery, Harvard Medical School; and Otto E. Aufranc, M.D., Assistant Professor of Orthopedic Surgery, Harvard Medical School. 371 pages with illustrations. St. Louis: C. V. Mosby Company, 1965. \$20.00.

As stated in the preface, this book is based on cases published in the *Journal of the American Medical Association* as "fracture of the month." Such a publication was anticipated and hoped for by this reviewer.

The contributors are many, including visiting celebrities, the visiting staff, and the resident staff of the Massachusetts General Hospital. The cases were discussed at Fracture Grand Rounds. All of the discussers are adequately identified and most of the visiting staff and guest participants are well known in orthopaedic circles.

The book is attractively bound in red. The format is pleasing. The illustrations number 199 figures, most of which are good black and white reproductions of x-rays. A few are retouched for emphasis and clarity. They are well chosen for illustrative purposes.

The style is that of the case presentation with frank and provocative discussion. The cases are well selected for teaching and reflect individual opinions of the discussers. This is not just a fracture "setting" manual. Controversial points of view are presented. Flexibility in choosing methods of treatment suitable to the individual patient is stressed. Several iatrogenic complications are well discussed. Overall patient evaluation is briefly, but carefully, presented. Some interesting mechanical devices are presented which should not be tried by the novice. (For example, the distraction apparatus pictured in Figure 62, page 128.)

Terminology is occasionally controversial. As an example, Case 20 is described as "fracture of

the neck of femur in a child." However, it is not the fearsome subcapital fracture and is more nearly an intertrochanteric fracture. A few typographical or editing errors are inevitable and do not detract from the overall usefulness of the book.

For those who wish to pursue an individual subject more thoroughly, there is an adequate and well chosen bibliography, conveniently placed just preceding the index. This is an excellent and readable reference book for any fracture surgeon or orthopaedic resident.

Griffin Bland, M.D.

**Surgery of the Biliary Passages and the Pancreas.** By Walter Hess, M.D., Professor of Surgery, University of Basle, Switzerland. 638 pages with illustrations. Princeton: D. Van Nostrand Company, 1965. \$25.00.

Gallstones are found in 15 to 18 per cent of the adult population in Europe and the United States. Cholelithiasis is the center of the pathology of the biliary passages and, "the area where surgery of the biliary passages takes place is one of the most complicated regions of the human body. It is not only a very vascular region but one where injuries to the vessels may be disastrous." Here is a book which encompasses in one volume a most complete survey of the complicated pathology, symptomatology, laboratory findings, and operative, and non-operative treatment of the diseases which plague the biliary system.

The book is well indexed and an excellent and extensive bibliography follows each chapter; beyond this there is an extensive gathering of information from many sources plus a broad base founded on the judgment of the author with the aid of his personal experience. This information is set in a concise, complete manner with clarity and authority. One is presented with a step-by-step record of answers to many questions, both simple and complicated in nature. The student and resident can learn from this book as well as the experienced operator since this book serves both as a textbook and as a reference book because



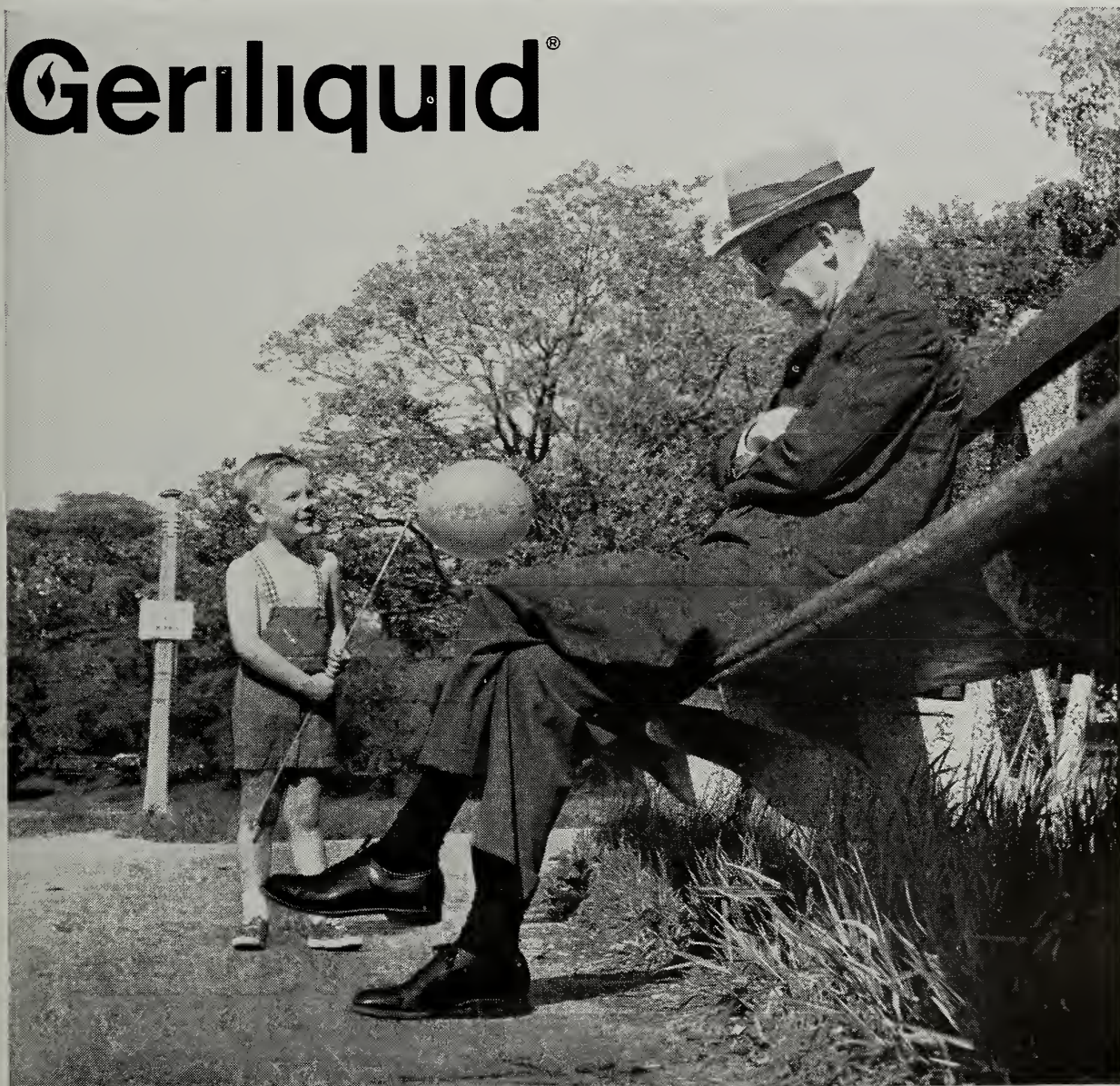
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impaired peripheral circulation, GERILIQUID increases the ability to walk farther with less pain. Patients particularly like the palatable, sherry wine base.

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**IN BRIEF: Composition:** Each 5 ml. contains: niacin 75 mg. and aminoacetic acid (glycine) 750 mg. in a palatable sherry wine base; alcohol 5%.

**Side Effects:** Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is concomitant administration of a coronary vasodilator.

**Administration and Dosage:** One or two teaspoonfuls 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation.

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of its many headings, simplification of text, and its excellent index.

The book is arranged in the usual form and begins with a description of the surgical anatomy of the biliary system. This is very extensive and includes the variations, histology, and a description of variations from the normal. It describes in detail the sphincter of Oddi and there is a clear and concise description of the liver and its various anatomical peculiarities. There follows a section on the physiology and herein the author describes the manometrics of the biliary system. The study of manometrics is very important throughout this entire book and the author bases much of his treatment on this study. Numerous x-rays demonstrate very clearly the flow of bile through the system. The pathology, diagnosis and course of the diseases which affect the biliary passages are found in the next section and here, along with a routine discussion of the various aspects of these diseases, the author goes into the stenosis of the papilla of Vater in much more detail than is usually seen. He recognizes this as an independent primary disease as well as that due to choledocholithiasis. The section on diagnostic techniques and interpretation thereof is very fine; here again, the technique of manometric examination of the ducts is studied with intensity and he describes in detail each test, the physiology of the test process, and his interpretation of the various determinations acquired. He describes laparoscopy and liver biopsy. He describes cholangiography and splenoportography and also the pancreatic function tests. A well thought-out section on differential diagnosis, including symptoms, x-ray findings, and chemical analysis follows.

The chapter on Intraoperative Diagnostic Procedures is perhaps one of the key parts of this book. This delves into the techniques of manometry and x-ray during the operation. The author bases his entire operative selection on these studies and these are done apparently routinely in his clinic where any possibility of biliary system disease other than gallbladder disease arises. Here, we find excellent pictorial representation of the various techniques and also the various results of these techniques, as shown by x-ray and by manometric readings. The interpretation of these is clear and of great value. He also includes the technique of choledochoscopy.

The last section of the book deals with the operative technique and for the student, resident, or experienced operator alike there is much to be

found here. Each procedure is demonstrated, both pictorially and by text. The numerous procedures and devices of the biliary surgeon all seem to be represented here. The author includes a résumé of his choice of operation and operative procedures and his indications for the use of these.

In summary, it may be said that this book fills a real need in supplying information both of textbook quality and quantity, while offering concise detailed analysis of individual subjects. It is a most complete, authoritative and factually based book for use by the student and the clinician as well.

RICHARD H. CLARK, M.D.

## Books Received

**Controversy in Internal Medicine.** By Franz J. Ingelfinger, M.D., Professor of Medicine, Boston University School of Medicine; Arnold S. Relman, M.D., Professor of Medicine, Boston University School of Medicine; and Maxwell Finland, M.D., Professor of Medicine, Harvard Medical School. 679 pages. Philadelphia: W. B. Saunders Company, 1966. \$14.50.

**Current Concepts in Medical Practice.** By John E. Mullins, M.D., Consultant to Hepatic Clinic, Washington University School of Medicine. 407 pages. St. Louis: C. V. Mosby Company, 1965. \$10.75.

**Surgery of the Foot.** By Henri L. DuVries, M.D., Assistant Clinical Professor of Orthopedic Surgery, University of California School of Medicine. 567 pages with illustrations. St. Louis: C. V. Mosby Company, 1965. \$17.50.

**Cardiac Evaluation in Normal Infants.** By Robert F. Ziegler, M.D., Physician-in-Charge, Division of Pediatric Cardiology, Henry Ford Hospital, Detroit. 140 pages with illustrations. St. Louis: C. V. Mosby Company, 1965. \$12.75.

**Therapeutic Radiology.** By William T. Moss, M.D., Professor of Radiology, Northwestern University School of Medicine. 503 pages with illustrations. St. Louis: C. V. Mosby Company, 1965. \$18.75.

**Symposium on Cataracts.** Transactions of the New Orleans Academy of Ophthalmology. 319 pages with illustrations. St. Louis: C. V. Mosby Company, 1965. \$19.50.



# WHEN MOTHER'S IRON ISN'T UP TO MOTHERHOOD

**IN BRIEF: ACTIONS AND USES:** A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency anemia may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

**COMPOSITION:** Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. of elemental iron in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

**ADMINISTRATION AND DOSAGE:** Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

**SIDE EFFECTS:** Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache, and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

**PRECAUTIONS:** If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

**CONTRAINDICATIONS:** Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only, it is contraindicated in other anemias.

**CARCINOGENICITY POTENTIAL:** Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

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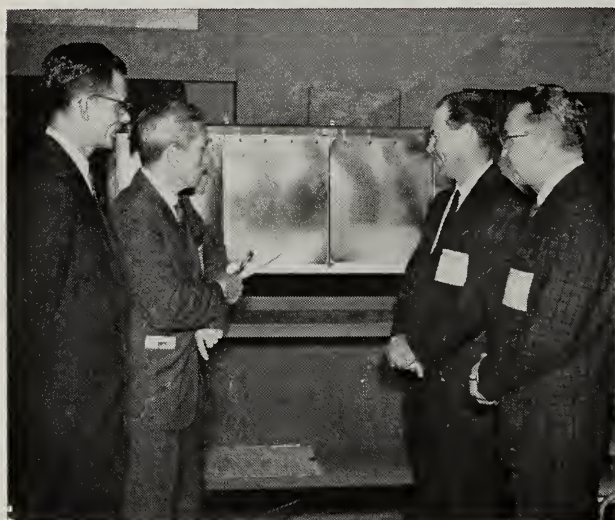


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### Thoracic Societies Meet at Biloxi

Twelve essayists and discussants appeared on the January program of the 10th Annual Tri-State Consecutive Case Conference on Respiratory Diseases at Biloxi, according to Dr. Willard H. Boggan, Jr., of Jackson, president of the Mississippi



*Discussing a chest film at the Tri-State Conference on Respiratory Diseases are, from the left, Drs. Jack Herring, John S. Chapman, Willard H. Boggan, Jr., and Clyde A. Watkins. The conference is a project of the tuberculosis associations of Alabama, Louisiana, and Mississippi.*

Thoracic Society. Co-sponsored by the thoracic societies of Alabama, Louisiana, and Mississippi, the two day seminar was conducted at the Buena Vista.

Appearing on the program were Drs. John S. Chapman of Dallas; Robert G. Ellison of Augusta, Ga.; Jack C. Greer, John H. Seabury, Howard Buechner, Hans Weill, John E. Salvaggio, and Hurst B. Hatch, Jr., all of New Orleans.

Also appearing were Drs. Holt A. McDowell and Robert Walton of Birmingham; James R.

Rasch of Keesler Air Force Base; and Clyde A. Watkins of Sanatorium.

Dr. Jack Herring of Sanatorium served as program chairman for the tri-state meet.

Officers of the Mississippi Thoracic Society, the host group, in addition to Dr. Boggan, include Drs. T. T. Justice of Gulfport, vice president; J. T. Hamrick of Hazlehurst, secretary-treasurer; J. Fred Allison and H. K. Stauss of Jackson, executive committeemen; Guy Campbell of Jackson, American Thoracic Society advisory council member; and Jack Herring of Sanatorium, conference representative.

### New Procedures Used in Disability Determination

New procedures and a widening scope of communication are changing the format for determination of disability under Social Security, according to Dr. B. F. Banahan, Jr., of Jackson, chief medical consultant to the Disability Determination Unit. In a statement to the JOURNAL, Dr. Banahan said:

"Physicians' preference has led to replacing the old disability questionnaire with a new narrative report form permitting doctors to give a clearer, more complete clinical picture of a claimant's impairment than formerly.

"In addition to the new reporting form," Dr. Banahan continued, "the agencies responsible for disability determinations are relying more heavily upon telephone communications with examining physicians."

He explained that additional clinical information may be sought by the agency consultant from the examiner by telephone, speeding up final action and minimizing demands upon the time of all.

Where more extensive information is required for a disability determination, Dr. Banahan added, the consultant may invite the examining physician to obtain it for a fee.



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SAVES  
MONEY  
WASTES  
WATER**



METAHYDRIN (trichlormethiazide) is prescribed by physicians because it not only approximates the diuretic efficacy of parenteral meralluride injection . . . but, *it is the least expensive of all "brand-name" thiazides.* Therefore, when you prescribe METAHYDRIN (trichlormethiazide) your patients receive the thiazide diuretic that removes a little more salt and water than earlier thiazides, with relatively less loss of potassium . . . and, it's therapy they can more easily afford . . . *only pennies a day.*

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oral diuretic

**Dosage:** One 2 or 4 mg. tablet once or twice daily.

**Precautions:** As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

**Side Effects:** Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have occasionally been noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by the administration of thiazides.

**Contraindications:** Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

**How Supplied:** Bottles of 100 and 1000 tablets.

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## Pre-exposure Rabies Vaccine Has NIH OK

Use of duck-embryo killed-virus rabies vaccine for pre-exposure immunization of those in "high-risk" groups has been approved by the National Institutes of Health. The vaccine produced by Eli Lilly and Co., is the only vaccine recommended for prophylactic use.

The vaccine, introduced in 1957 after a six-year development project, is safe for such use because its duck-embryo origin greatly reduces the serious problem of isoallergic encephalomyelitis and neuromyolytic reactions. These can be caused by the "paralytic factor" found in Pasteur-type vaccines made from rabbit or other brain tissue.

The pharmaceutical firm has announced a change in the packaging of its rabies vaccine to allow better utilization and economy. A new single-dose package has been introduced to replace the seven-dose kit formerly marketed. The new one-unit size, consisting of a single vial of dry vaccine with one ampule of diluent (sterile water for injection), allows ready availability of the full fourteen-dose series needed to treat suspected or confirmed cases of rabies and also provides conveniently for the individual doses used for pre-exposure immunization.

Two dosage schedules have been recommended for use with pre-exposure immunization. Both appear to be equally effective. In one technique a series of four subcutaneous injections of 1 ml. each is required. The first three injections are given one week apart, with the fourth being given five to six months after the third dose. The second regimen calls for a series of three subcutaneous injections of 1 ml. each. The first two injections are given one month apart, and the third is administered seven months later.

Experimental data indicate that over 80 per cent of immunized individuals have obtained sufficient blood-level protection against rabies within one month after completion of either of the dosage schedules. Antibody immunity can be maintained thereafter by a single 1-ml. booster injection every one to two years. In subsequent instances of mild exposure to rabies, a single 1-ml. dose of vaccine should be administered.

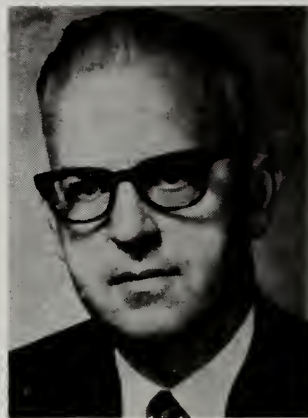
In case of severe exposure, such as from bites of animals known to be rabid or deep bites on the

head, neck, face, or arm, the complete post-exposure fourteen-dose immunization procedure is recommended.

Except for the new recommendations for pre-exposure use, all other duck-embryo killed-virus vaccine information—contraindications, precautions, and postexposure immunization dosages—is unchanged.

## Michigan Executive Is New Blue Plan Head

J. C. Woosley of Detroit, Mich., has been elected president of the Mississippi Hospital and Medical Service, Inc. He assumed duties with the combination Blue plan on Feb. 11, succeeding Richard C. Williams who resigned as president in the fall of 1965.



J. C. Woosley

The announcement was made simultaneously by Owen Cooper of Yazoo City, vice chairman of the Mississippi Blue plan board of directors, and W. S. McNary of Detroit, president of Michigan Blue Cross.

Cooper said that "we are indeed fortunate to be obtaining a chief executive officer" of Woosley's caliber.

For 10 years, Woosley has been associated with Michigan Blue Cross in statistical and research services. He has conducted a number of studies on hospital services in his capacity with the Michigan hospital plan.

Woosley has earned B.A., M.A., and Ph.D. degrees in chemistry, mathematics, and public health statistics. Prior to being associated with the Michigan Blue Cross, he worked as a chemist with the U. S. Corps of Engineers, the Shell Oil Co., and the Pan American Petroleum Co.

He is a veteran of World War II, having served in the Army Chemical Corps. He is a member of the American Statistical Association, the American Public Health Association, the American Association for the Advancement of Science, and the Michigan Gerontological Society. He and Mrs. Woosley have six children of ages 7 through 21 years.



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AND  
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Metatensin lowers blood pressure and keeps it low—effectively and economically. It combines reserpine with trichlormethiazide which affords more potent saluresis with less loss of potassium than from earlier thiazides. Reserpine contributes antihypertensive effect by relieving anxiety and tension. Metatensin is well-tolerated over long periods; with its effectiveness and economy it assures antihypertensive therapy you and your patients can stay with.

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Each scored tablet contains:  
METAHYDRIN® (trichlormethiazide)  
2 mg. or 4 mg. and  
Reserpine 0.1 mg.

**Usual adult dose:** One tablet twice daily. **Precautions and side effects:** Patients with hepatic cirrhosis or diarrheal syndromes, or under therapy with digitalis, ACTH, or potassium-losing steroids, should be observed for signs of hypokalemia. With thiazides, electrolyte depletion, diabetes, gout, granulopenia, nausea, pancreatitis, cholestatic jaundice, flushing, mild muscle cramps, constipation, photosensitivity, acute myopia, perimacular edema, paresthesias, neonatal bone marrow depression in infants of mothers who received thiazides during pregnancy, skin rash or purpura with or without thrombocytopenia, may occur. With reserpine, untoward effects may include depression, peptic ulcer and bronchial asthma. Withdraw medication at least 7 days prior to electroshock therapy, 2 weeks prior to elective surgery.

**Contraindications:** Complete renal shutdown, rising azotemia or development of hyperkalemia or acidosis in severe renal disease.

**Supplied:** Metatensin tablets, 2 mg., 4 mg.—bottles of 100 and 1000.

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## Low Sodium Diet Leaflets Available

The first of three simplified leaflets based on the Heart Association's sodium-restricted diet booklets is now available to physicians and other professional workers. Like the booklets, it may be obtained by patients only if they present a physician's prescription.


Entitled "Sodium Restricted Diet, 500 Milligrams," the leaflet was developed in cooperation with the Heart Disease Control Program of the U. S. Public Health Service and The American Dietetic Association. Although the diet is the same, the leaflet contains less detail than the 56-page booklet from which it was adapted. Also, it has been planned so that when it is completely unfolded it becomes a 20 by 14 inch chart suitable for posting in kitchens. In addition to the daily diet plan and food lists, the leaflet carries important information on sources of sodium, shopping and cooking, eating out and seasonings.


Two additional simplified leaflets, corresponding to the AHA booklets, "Your 1,000 mg. Sodium Diet" and "Your Mild Sodium-restricted Diet," will be published shortly.

The 500 milligram leaflet is presently available from local heart associations.



## DEATHS

 CULLEY, JOHN CLIFTON, Oxford. M.D., Vanderbilt University School of Medicine, Nashville, Tenn., 1909; Fellow, American College of Surgeons; emeritus member of MSMA and member of the Fifty Year Club; a past president of the Mississippi State Medical Association; died Jan. 31, 1966, aged 79.

 GORDIN, ARCHIE EWING, Pass Christian. M.D., University of Virginia School of Medicine, Charlottesville, 1915; residency, San Francisco County Hospital, Calif.; Fellow in the American College of Surgeons, the International College of Surgeons, and the Southeastern Surgical Congress; emeritus member of MSMA and member of the Fifty Year Club; died Jan. 4, 1966, aged 73.

## AAP and ACCP Urge Tuberculosis Tests

The American Academy of Pediatrics and the American College of Chest Physicians have recommended that all children between the ages of 6 and 12 months of age be tested for tuberculosis. The tests should be given, if possible, before the child has been vaccinated against measles or smallpox.

The recommendations of the two organizations were made in a joint-committee statement. The committee emphasized that tuberculous infection in children is still prevalent, and that testing for tuberculosis should be "repeated annually up to 4 years of age and thereafter every 2 years, depending on the risk of exposure of the child and the prevalence of tuberculosis in the population group."

The committee noted that early treatment of tuberculosis with the drug, isoniazid, has been especially effective in young children.

In an earlier statement, the two organizations urged their members and other groups of physicians including obstetricians, general practitioners, and health officers to "join in the nationwide endeavor to protect children against the hazards of tuberculosis." The statement noted that children infected with tuberculosis should be "treated with well-known methods to prevent them from developing tuberculous complications during childhood."

The statement indicated that such testing and treatment would "speed up" the elimination of tuberculosis, and that "all necessary procedures are now available to accomplish this goal."

Tuberculosis annually infects approximately 20 million people throughout the world, resulting in death for some 3 million people each year.

## Dr. Barnes, Son Are Injured in Car Crash

Dr. G. Spencer Barnes of Columbus and his son, George Spencer, Jr., were injured in a two car collision near Carthage on state highway 16 recently, but both have been released from the hospital. Three persons, including Dr. Barnes' aunt, Mrs. Lilly Spencer Graves, were killed in the accident.

Dr. Barnes, president of the Prairie Medical Society, was hospitalized at Jackson. He has returned to his practice at Columbus.



# a rapid lift from the hell of depression

often relieves  
mental pain  
in 2-5 days



Doré Illustration  
from  
Dante's Inferno

## NORPRAMIN<sup>®</sup> (desipramine hydrochloride)

Norpramin is a rapid-acting specific drug for the treatment of depression. Depressive signs and symptoms—sometimes described as “mental pain”—typically begin to improve in 2-5 days. Patients are more hopeful, less empty and less weighed down by their troubles. Norpramin has only slight sedative qualities, nevertheless anxiety *secondary to depression* is frequently relieved as depression is lifted. If anxiety or tension persists it can be controlled by adding a tranquilizer or by reducing dosage. Norpramin is not a MAO inhibitor. Side effects are usually mild.

### DOSAGE AND ADMINISTRATION

Optimal results are obtained at a dosage of about 150 mg./day—two 25 mg. tablets t.i.d. After achieving optimal results, a maintenance dose (50-100 mg./day) should be sought.

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### IN BRIEF:

**Indications:** In depression of any kind—neurotic and psychotic depressive reactions; manic-depressive or involutional psychotic reactions.

**Contraindications and Precautions:** Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established.

**Adverse Effects:** Side effects, usually mild, may

include: dry mouth, constipation, dizziness, palpitation, delayed urination, “bad taste,” sensory illusion, tinnitus, agitation and stimulation, sweating, drowsiness, headache, orthostatic hypotension, flushing, nausea, cramps, weakness, blurred vision and mydriasis, rash, allergy, transient eosinophilia, granulopenia, altered liver function, ataxia and extrapyramidal signs.

**Supplied:** Norpramin (desipramine hydrochloride) tablets of 25 mg., in bottles of 50, 500 and 1000.



## Waynesboro Doctors Man EMCU Full Week

The period Feb. 14-17 has to be "Waynesboro Week" in the Mississippi Legislature, because each Doctor of the Day who served hails from that southeast Mississippi industrial community. The physicians made the decision to have 100 per cent Waynesboro representation, and those not coming to the state association's Emergency Medical Care Unit during the week backstopped their colleagues at home.

Serving were Drs. James M. Dabbs, Feb. 14; A. F. Dugger, Jr., Feb. 15; L. O. Murphy, Jr., Feb. 16; and James P. Wood, Feb. 17. Both the president, Dr. Everett Crawford of Tylertown, and the Council on Legislation extended congratulations and appreciation to the Waynesboro doctors.

## USPHS Urges Measles Vaccination

Re-enforcing the state medical association's assault on measles, a recent statement by the U. S. Public Health Service Advisory Committee on Immunization has placed high priority on eliminating the disease from the American health scene.

Recognizing measles as one of the most important causes of serious morbidity in childhood, the committee said that "all children presumed susceptible should be immunized." The statement urged continuing maintenance programs aimed at vaccinating children at about one year of age in every community.

The concept of full immunization for all children entering nursery schools and elementary schools was stressed in view of measles transmission occurring principally in such environments.

MSMA's House of Delegates, acting at the 97th Annual Session in 1965, urged sponsorship of community-wide nongovernmental immunization programs of measles vaccination by component medical societies similar to the successful Sabin vaccine programs against poliomyelitis.

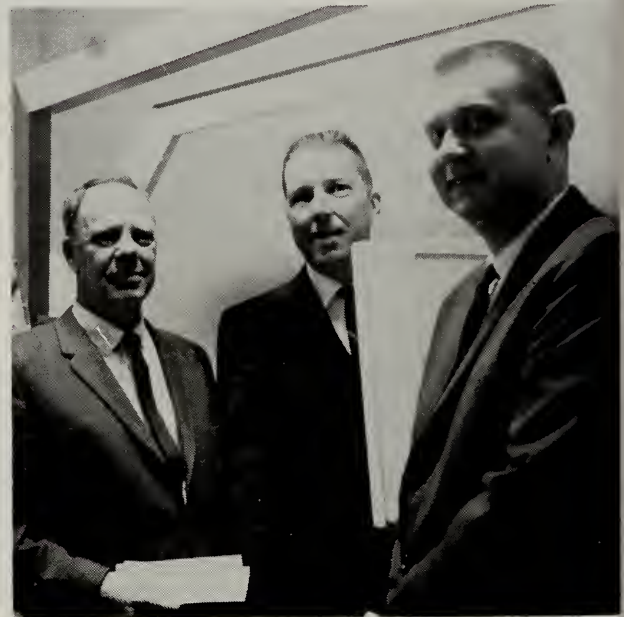
During February, Dr. Everett Crawford, state association president, urged each component society to consider such programs in 1966.

## Dr. Goodrich Takes Nuclear Medicine Post

Dr. Jack K. Goodrich, formerly of the University of Mississippi School of Medicine, has been named associate professor of radiology at the Duke University and head of the division of nuclear medicine. He has already relocated at the Durham, N. C., campus.

For six years, Dr. Goodrich was associate professor of radiology at UMC, and he has served as secretary of the Mississippi Radiological Society. He is a graduate of the University of Tennessee School of Medicine, a diplomate of the American Board of Radiology, and a veteran of Air Force service as a medical officer.

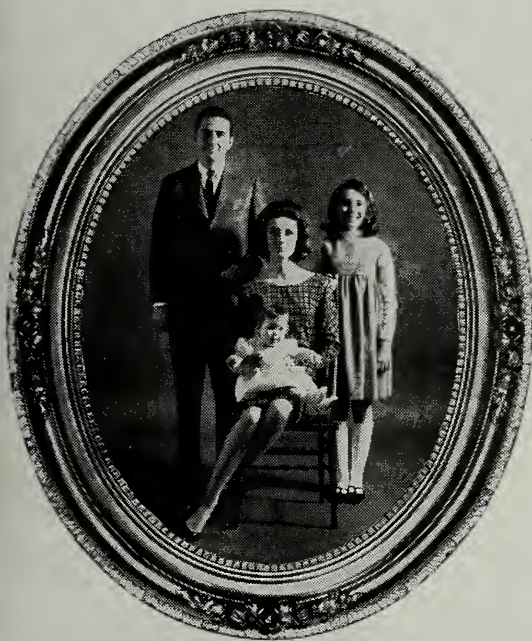
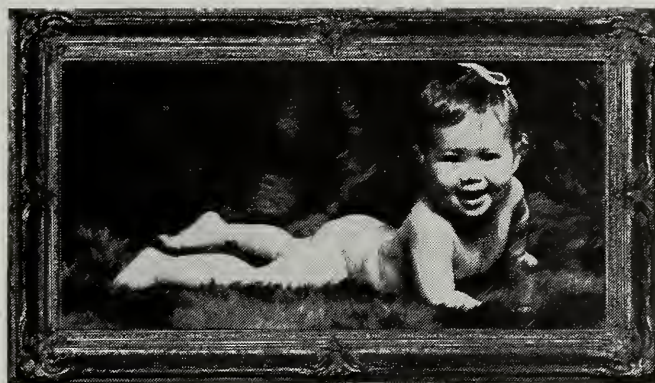
## TB Association, SBH Give X-ray to UMC



*The Mississippi Tuberculosis Association and the Mississippi State Board of Health equally shared the purchase of an in-and-out patient mass screening x-ray machine for the University of Mississippi Medical Center in Jackson. The \$12,000 equipment will assist in detecting tuberculosis and other respiratory diseases. Pictured with the checks for the installed equipment are (left to right) Mr. Fred C. Zimmerman, Comptroller of the University of Mississippi Medical Center, Mr. Judson C. Allred, Executive Director of the Mississippi Tuberculosis Association, and Dr. J. T. Hamrick, Director, Division of Tuberculosis Control, Mississippi State Board of Health.*



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## JCAH Expands Organization

Representatives from two health-related organizations have been seated on the expanded Board of Commissioners of the Joint Commission on Accreditation of Hospitals. Added are the American Association of Homes for the Aging and the American Nursing Home Association.

The expansion represents the first augmentation of the board since organization of JCAH in 1952. Other organizations represented are the American Medical Association with seven commissioners, the American Hospital Association with seven commissioners, the American College of Surgeons with three commissioners, and the American College of Physicians with three commissioners. The two newly added organizations have one commissioner each.

Three of the board's four officers are physicians, including the director of the commission and secretary of the board, Dr. John D. Porterfield of Chicago.

## Cardiovascular Seminar Set for UMC

Renal aspects of cardiovascular disease will be emphasized at the 13th Annual Cardiovascular Seminar March 30, 31, and April 1 at the University Medical Center in Jackson.

Guest lecturers are to be Dr. Thomas E. Starzl, professor of surgery at the University of Colorado Medical Center; Dr. Benjamin R. Gendel, professor of medicine at Emory University School of Medicine; Dr. Mitchell I. Rubin, professor of pediatrics and chairman of the department at State University of New York at Buffalo; and Dr. W. Gordon Walker, associate professor of medicine at Johns Hopkins.

University Medical Center faculty participating in the seminar will be Dr. Joel G. Brunson, professor of pathology and chairman of the department; Dr. James D. Hardy, professor of surgery and chairman of the department; Dr. William C. Holland, professor of pharmacology and chairman of the department; and Dr. Hilary H. Timmis, assistant professor in the department of surgery.

## Corinth Doctor Is TTWA Official

Dr. Frank M. Davis of Corinth was elected vice chairman of the Tennessee-Tombigbee Waterway Authority, the four state commission planning a navigable water link between the Tennessee River and the Gulf of Mexico.

The authority chairman is Rankin Fite, speaker of the Alabama House of Representatives. If customary procedure is followed, Dr. Davis will be elevated to the chairmanship in 1967. The four state members are Alabama, Kentucky, Mississippi, and Tennessee.

Dr. Davis, initially appointed to the authority by Gov. Barnett, is a past vice president of the state medical association and a current member of its Council on Legislation.

## Gifts to Millsaps Made in Doctor's Memory

A gift of more than \$1,000 in medical and laboratory equipment has been presented to Millsaps College for use in the department of biology in memory of the late Dr. Norman Burnstein of Jackson. He was one of five killed in an aircraft accident in South Dakota last fall which claimed the lives of two physicians.

The gift was made by Mrs. Burnstein and acknowledged with appreciation by college officials who said that gifts of this nature help in closing the gap where science departments are unable to purchase equipment.

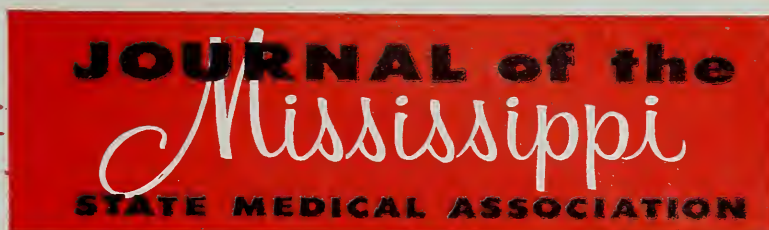
## Abstract Deadline Set for Heart Meet

May 15 is the deadline for submitting abstracts of papers to be presented at the American Heart Association's 1966 Scientific Sessions. The Sessions will be held October 21-23 in New York's Americana Hotel.

Official forms for submitting abstracts of papers and applications for scientific exhibit space may be obtained from Richard E. Hurley, M.D., American Heart Association, 44 East 23rd Street, New York, N. Y. 10010.



Volume VII  
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April 1966



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# NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

April 1966

Dear Doctor:

The strict HEW guidelines prohibiting racial segregation in hospitals and nursing homes are a big stick in Medicare. Hospitals and extended care facilities deemed not in compliance will not be paid for Medicare patients when the program becomes operative July 1. Notice to this effect has been served on 10,000 institutions by HEW.

Enforcement arm for program is new Office of Equal Health Opportunity under jurisdiction of U.S. Surgeon General. Given broad powers under Title VI of the Civil Rights Act of 1964, OEHO will be able to intervene in any federally financed health program anywhere in nation.

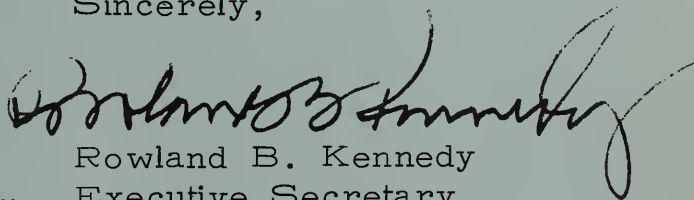
Woman's Auxiliary "Buckle Your Seat Belt" program has been widely successful throughout state and is making major contribution to auto safety. Mass news media, outdoor advertisers, merchants, and a variety of organizations have pitched in to push campaign. Project was under chairmanship of Mrs. David L. Clippinger of Hazlehurst.

Physicians are warned against buying so-called "Medicare handbooks" now being offered in direct mail selling campaigns. Publications contain only basic information in law itself and will be worthless in preparing claims. Part 1-B regulations on supplementary medical insurance have not yet been issued and when available, distribution will be made to doctors.

State Board of Health has warned that accidental poisoning fatalities in Mississippi are up 33 per cent over last year. Twenty-seven per cent of victims are under age 5, and 15 per cent are over 65. Deaths from poisonings are more than twice the combined toll for diphtheria, whooping cough, polio, typhoid, and tetanus, the old killers.

American Association of Blood Banks' new brochure on recruiting volunteer donors has been endorsed by most major health organizations. Leaflet entitled "Supply, Demand, and Human Life" focuses attention to critical need for donors by most blood banks.

Sincerely,



Rowland B. Kennedy  
Executive Secretary



## DATELINE - MEDICAL AMERICA

### AMA-ERF Hikes Interest On Loan Program

Chicago - Reacting to the Federal Reserve Board's upping the bank discount rate and the hike in the prime interest rate to 5 per cent by bankers, AMA-ERF has raised its loan interest to 6 per cent while the borrower is in medical training and to 7 per cent during the repayment period. New rate is effective April 1 and will be simple interest. AMA-ERF loan policy specifies that rate shall be 1 and 2 points above prime rates.

### VA Will Test New 'Hometown Care' Formula

Washington - The Veterans Administration has announced a pilot project on a new Hometown Care program formula in Alabama, Colorado, and Indiana. Veterans entitled to care will be given identification cards, and physicians will be paid on a fee-for-service basis. Program has always required "prior authorization" for local care. In new program, any care costing more than \$30 per month will be subject to old formula. If successful, VA will consider making new formula universally applicable.

### Medical School Faculty Staffing Is Said More Critical

Evanston, Ill. - The Association of American Medical Colleges says that the number of unfilled faculty positions in the nation's medical schools will almost double by 1975. Total in faculties has increased from 3,900 in 1951 to more than 10,300 today. The new AAMC projections do not include additional demands which will be put on schools with development of Heart Disease, Cancer, and Stroke Regional Center program.

### President's Health Message Seeks Spending Expansion

Washington - President Johnson's domestic health message to Congress proposes federal spending of \$4.67 billion for the 1967 fiscal year, an increase of \$1 billion over current year. Add to this the \$3 billion which Medicare will cost from tax funds, and the domestic health total is nearly \$7.7 billion. New presidential proposals in the main expand existing training, research, and construction programs, all aimed at "comprehensive health services."

### Polio Incidence In 1965 Hits Record Low

New York - The Health Insurance Institute reported that only 59 cases of poliomyelitis were recorded in the United States during 1965. In contrast with 1955 when the Salk vaccine was first approved, there were about 29,000 cases. Decline has been dramatic, especially since Sabin oral vaccine came into use in 1961. HII said 28 states had no cases, 11 states had one case, and the rest more than one. Texas led with 16 cases.





ORIGINAL PAPERS

## The Solitary Pulmonary Nodule

RUSH E. NETTERVILLE, M.D.

Jackson, Mississippi

SOLITARY PULMONARY NODULES or "coin lesions" are frequently seen in chest films, and their management is most important because a high percentage are malignant. These lesions have been defined as well circumscribed nodules within the pulmonary parenchyma which may be rounded or oval in shape and 6 cm. or less in diameter. Lesions less than 0.8 cm. in diameter with soft tissue density are not usually visible on chest roentgenograms. The size of the lesions under consideration vary from 0.8 cm. to 6 cm. in diameter. If there is any associated pneumonitis or atelectasis, it is minimal.

The use of mass survey x-rays and the more frequent use of chest roentgenograms in the routine work-up of patients has revealed more and more of these lesions before symptoms appear. Many are noted as an incidental finding while the patients are being studied for other complaints. If appropriate studies do not reveal the diagnosis within a reasonable period of time, a thoracotomy should be performed with excision of the nodule and diagnosis by frozen section. The management of this lesion is comparable to that for an undiagnosed breast nodule. The diagnosis of a breast lesion that can be palpated is often impossible without a biopsy. This has become an accepted procedure. This is no less true in the lung than in the breast. Thoracotomy in

the good risk patient carries very little risk. Procrastination in order to make several x-ray studies over a period of time may permit the lesion to spread and thus the opportunity for a cure is lost.

A careful history should be taken, although

---

*Mass survey x-rays and the more frequent use of chest roentgenograms in the routine work-up of patients reveal more and more solitary pulmonary nodules before the symptoms appear. The author states that a thoracotomy should be performed with excision of the nodule and diagnosis by frozen section if appropriate studies do not reveal the lesion to be benign. He writes that procrastination in order to make x-ray studies over a period of time may permit the lesion to spread and the opportunity for a cure may be lost.*

---

practically all of these lesions, both benign and malignant, are asymptomatic when very small. The presence of some symptoms is slightly more common in the malignant than in the benign. A history of previous malignancy elsewhere in the body introduces the possibility of a solitary metastasis. Metastatic lesions, however, are usually multiple, and the solitary lesion may still be a

From the Jackson Surgical Group.

# PULMONARY NODULE / Netterville

primary carcinoma.<sup>1, 2</sup> Bronchogenic carcinoma is more common in smokers than in nonsmokers. The physical examination may reveal evidence of malignancy in other organs such as the thyroid, cervical lymph nodes or liver. The skin should be carefully inspected for evidence of malignant melanoma.

## OLD FILMS

Old films should be obtained on the patient if available. If the nodule has recently appeared and especially if it has shown evidence of recent growth, malignancy becomes a more likely possibility. The presence of the lesion on films made some time previously is not conclusive evidence that it is benign. More and more cases are reported where a lesion although present for several years with little change is found to be malignant.<sup>1, 2, 3</sup> The lesion should be stable for at least four or five years before one can reasonably rule out the likelihood of malignancy.

The detailed appearance of the nodule on the x-ray may give some clue to the diagnosis. The presence of a notch or umbilication is strong evidence of malignancy.<sup>3</sup> If the lesion is well circumscribed and smooth, one would naturally think first of a benign lesion, but malignant lesions often have this appearance before bronchi are obstructed or pneumonitis occurs. The presence of concentric rings of calcium or diffuse calcification in a nodule is adequate evidence that it is a granuloma; however, flecks of calcium do not rule out the possibility of malignancy.<sup>1, 2, 4, 5, 6</sup> Laminography is often necessary to determine the presence of calcium and should be done on all doubtful cases.

## SKIN TEST

Skin tests are of some help in that negative skin tests for tuberculosis and fungi give stronger evidence in favor of malignancy. If the tuberculin skin test is positive, it does not rule out malignancy, but antimicrobial coverage for surgery is indicated.<sup>4</sup>

Scalene lymph node biopsy and bronchoscopic studies in cases of solitary pulmonary nodules give a very low yield of positive results and are not routinely done, especially in case of small lesions.

If the above studies are not diagnostic, a thorotomy is indicated. The lesion should be removed by wedge resection, or if too large for this, a biopsy taken for frozen section. If the lesion is

found to be malignant, an appropriate resection should be performed. This is usually accomplished by lobectomy, but in some cases a pneumonectomy is indicated.

Bateson<sup>5</sup> reviewed 2,958 cases reported in the literature from 1944 to 1960, and there were 1,063 cases of bronchogenic carcinoma or an incidence of 35.9 per cent. There were 168 cases of solitary metastases or 5.7 per cent and 1,096 granulomas or 37 per cent. The remainder of the cases were mixed tumors, adenomas, cysts, and other lesions.

Steele<sup>6</sup> reviewed the experience of 78 hospitals (65 United States Veterans Administration hospitals and 13 United States Armed Forces hospitals) with 1,034 cases of solitary pulmonary nodules. Malignancy was found in 316 cases or 30.4 per cent. The incidence of malignancy was found to increase with the age of the patient (Table 1).

TABLE 1  
AGE INCIDENCE OF CARCINOMA  
IN STEELE'S SERIES

Age	Number of Cases of Carcinoma	Percentage of Carcinomas In Age Group
25-29	1	2
30-39	15	9
40-49	45	20
50-59	56	41
60-69	127	50
70-79	31	70
80-83	5	100

Several cases are reported below for illustrative purposes.

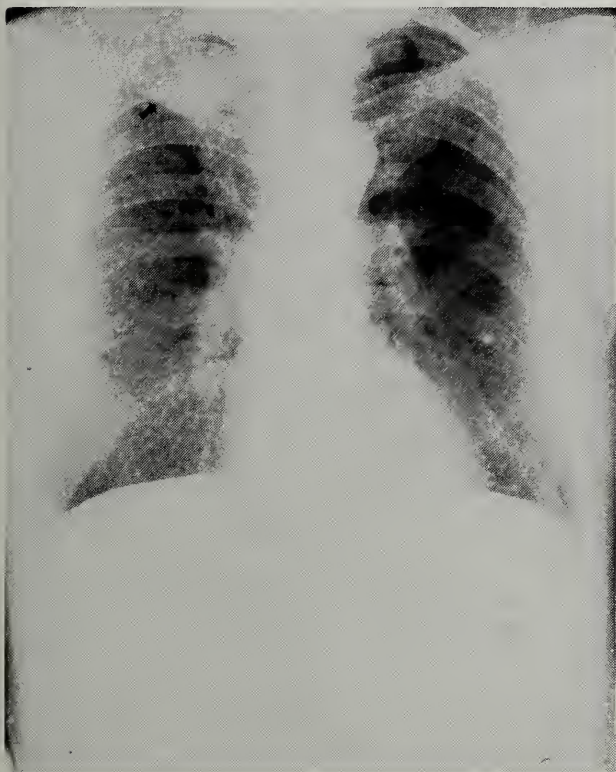
## CASE I

A 53-year-old white male was admitted to the Mississippi Baptist Hospital June 10, 1961, because of abnormal findings on a recent routine chest x-ray. There had been slight pains about his heart for two weeks, but this was not thought to be connected with his x-ray findings. He denied hemoptysis, weight loss, and dyspnea. There had been no change in his "smoker's cough." He had smoked from one and one-half to two packages of cigarettes daily for 37 years. Admission chest roentgenogram (Figure 1) revealed a rounded density in his right apex measuring 4 by 5 cm. X-rays made elsewhere in 1956 and 1958 did not reveal this lesion. Bronchoscopy was performed, and the findings, including bronchial washings, were normal. The scalene fat pad was removed



on the right and the lymph nodes were histologically normal. The second strength PPD and histoplasmin skin tests were positive.

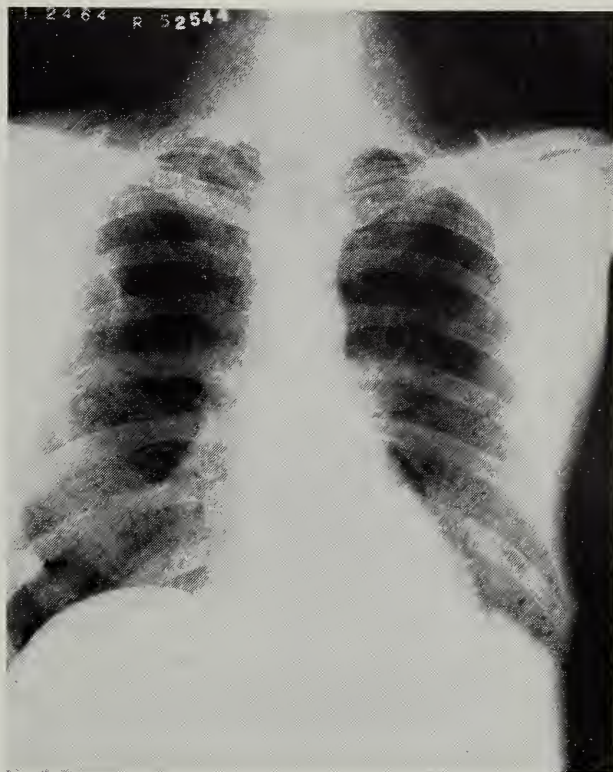
On the fifth hospital day a right upper lobectomy was performed. An epidermoid carcinoma of the lung without metastasis to lymph nodes was found. He was discharged on the ninth postoperative day and has done well since.



*Figure 1. Chest roentgenogram revealing a 4 by 5 cm. nodule in the apex of the right lung (Case 1).*

## CASE II

A 37-year-old white male was admitted to the St. Dominic Jackson Memorial Hospital Dec. 1, 1964, because of a nodule in his right lung. He had consulted his family physician on Nov. 13 because of a respiratory infection. A chest x-ray at that time revealed pneumonia of his left lung and a solitary nodule near the periphery of his right lung. The pneumonia cleared with treatment (Figure 2). This lesion was not present on x-rays made in 1956 and 1957. Laminographic studies failed to reveal calcium in the nodule. The patient stated that he had smoked all his adult life. The histoplasmin skin test was positive and the intermediate strength PPD skin test was negative. Complement fixation tests for histoplasmosis, blastomycosis, and coccidioidomycosis were negative.



*Figure 2. There is a 2 cm. well circumscribed nodule in the right costophrenic angle (Case 2).*



*Figure 3. Erect radiograph of chest (Case 3), demonstrating a 1 cm. nodule in the left third intercostal space.*



## PULMONARY NODULE / Netterville

On Dec. 3, 1964, a wedge resection of the lesion of the right lung was performed and a frozen section revealed a granuloma. *Histoplasma capsulatum* organisms were found in the lesion when special stains were used. He had a smooth postoperative course and was discharged on the eighth postoperative day. There has been no progression of his disease since that time.

### CASE III

A 57-year-old white male was admitted to the University Hospital Aug. 4, 1964, by his family physician because of pneumonitis of his right lung. He had become acutely ill a few days previously with fever and a severe cough without hemoptysis. He gave a history of having smoked three packages of cigarettes daily for about 40 years. Admission chest x-ray revealed an area of infiltration in his right midlung fields and a 1 cm. density in the left midlung at the level of the 3rd rib anteriorly. The pneumonitis cleared with treatment but the nodule remained (Figure 3).

The lesion was not present on a chest roentgenogram made in 1962. Laminograms of the lesion failed to reveal calcium. Pulmonary function studies after the pneumonitis had cleared revealed definite impairment of function. It was considered advisable to place him on treatment and have him refrain from smoking in order to improve pulmonary function before resection of the lesion.

He was readmitted Sept. 7, 1964, and pulmonary function studies revealed some improvement in his obstructive ventilatory impairment. He also could climb short flights of stairs without much dyspnea. On Sept. 10, 1964, the lesion of his left lung was removed and frozen section revealed an adenocarcinoma. A left upper lobectomy was performed. He did well postoperatively and was discharged on his 10th postoperative day. He has not shown any evidence of recurrence to date.

### CASE IV

An 18-year-old white male was admitted to the University Hospital on Dec. 27, 1960, because of a lesion in his left lung which was picked up on a survey film. He denied weight loss, cough, dyspnea, hemoptysis, and chest pain. He had never smoked. A chest x-ray revealed a well circumscribed lesion in his left lung 2.3 cm. in diameter (Figure 4). Laminograms were done, and there was no evidence of calcium. PPD and

histoplasmin skin tests were negative. The lesion was removed and proved to be an adenocarcinoma. A lobectomy was done. He was discharged improved. However, the carcinoma recurred several months later and the patient expired.

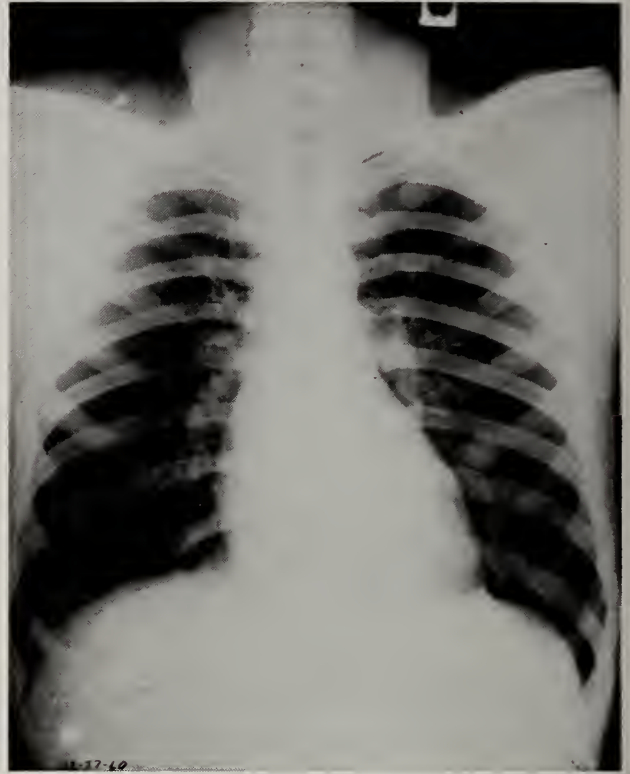


Figure 4. Nodule in the left lung 2.3 cm. in diameter (Case 4).

### CASE V

A white female age 55 years was admitted to the Mississippi Baptist Hospital on Sept. 6, 1965, complaining of a lesion in her right lung. A recent chest x-ray made by her family physician revealed a nodule measuring 3.5 by 5 cm. at the level of the right 5th rib anterolaterally in the right lung extending to the pleura. A repeat film in the hospital did not reveal any change (Figure 5). A survey film made on Sept. 22, 1964, was obtained, and the lesion was present but much smaller at that time. She denied pain, loss of weight, dyspnea, cough, or hemoptysis. She had smoked for 25 years.

Laminograms did not reveal any evidence of calcification. Thoracotomy was performed on Sept. 10, 1965, and there was a spherical tumor attached to the middle and upper lobes over an area of about 1 cm. and to the anterior chest wall over an area of about 2 cm. It was almost free in the pleural cavity except for these attachments. The tumor was separated from the middle and



upper lobes by wedge resection and from the chest wall by removing a block of the chest wall with it. One rib with the pleura and muscle attachments was removed over a 7 cm. area. The chest wall was repaired with marlex mesh. The tumor proved to be a malignant mesothelioma. She had a smooth postoperative course and was discharged from the hospital on the eighth postoperative day. She has done well since.



*Figure 5. Nodule demonstrated at the periphery of the right lung (Case 5) measuring 3.5 by 5 cm.*

### SURVIVAL RATE

Paulson<sup>7</sup> stated that in his experience with 24 solitary pulmonary nodules due to bronchogenic carcinoma which were asymptomatic 75 per cent were alive two years and longer after surgical removal. He had 41 cases of symptomatic lesions and the survival rate for two or more years was only 38 per cent.

Burford and co-workers<sup>8</sup> reviewed the experience with 1,008 cases of bronchogenic carcinoma treated at the Barnes Hospital between Jan. 1, 1948 and Dec. 31, 1955. Only 35 per cent of the entire series were resectable. At the time the other patients consulted the surgeon the disease had spread and resection was not performed. Of those who had been resected five years or more before the termination of the studies 22 per cent were alive.

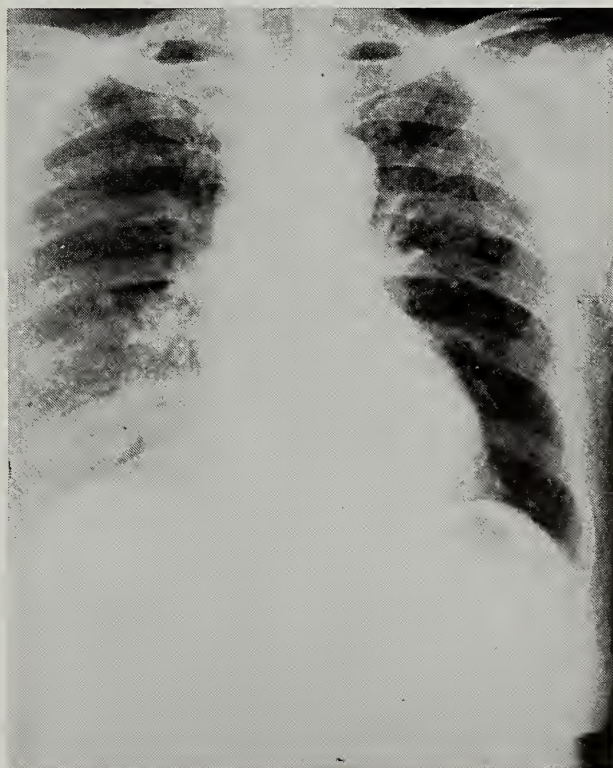
The patients with a malignant solitary pulmonary nodule usually represents an early phase of the disease before metastases has occurred. This is the ideal candidate for surgical therapy. The five year survival in this group of cases should be about 40 per cent.<sup>2</sup> Indecision and delay on the part of the first physician consulted by the patient may permit this small carcinoma to spread beyond the hope of cure. Pulmonary nodules should be considered malignant until proven otherwise.

### SOLITARY METASTATIC LESIONS

In the patients with a solitary metastatic carcinoma in whom the primary malignancy has been otherwise controlled, resection results in a 26 per cent chance of a five year survival.<sup>9</sup>

### CASE VI

A 60-year-old white female was first seen on May 17, 1954. A left radical mastectomy was performed on her by another surgeon on April 4, 1953, for adenocarcinoma of the breast. She was later given x-ray therapy by Dr. A. J. McIlwain, Jackson, Miss. A chest x-ray on June 16, 1953, was normal. She had a severe attack of bronchitis



*Figure 6. Chest roentgenogram (Case 6) made Feb. 15, 1954 reveals a very small nodule in the right third intercostal space.*

in December 1953, which responded to penicillin. A chest roentgenogram on Feb. 15, 1954, revealed a small lesion in the 3rd anterior intercostal space on the right (Figure 6). Another chest roentgenogram on May 14, 1954 (Figure 7), revealed that the tumor had grown consider-

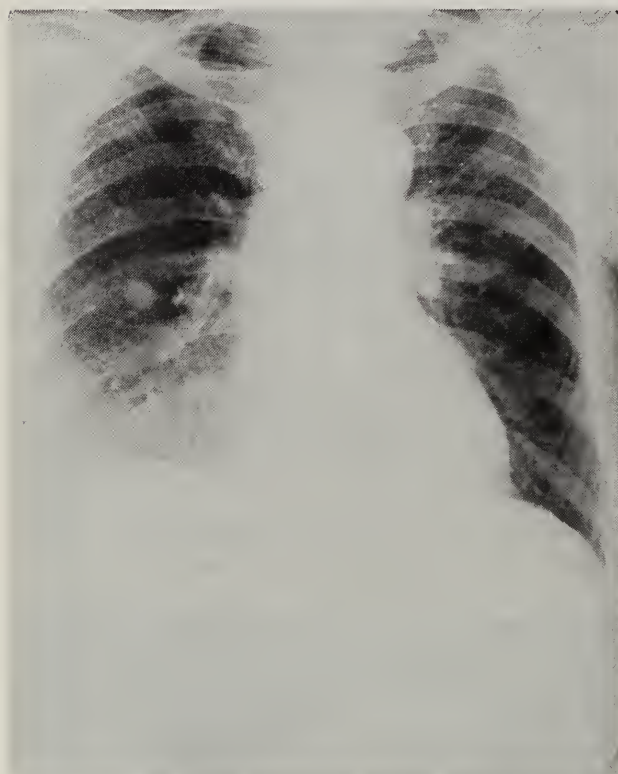


Figure 7. There has been definite increase in the size of the lesion on this film taken May 14, 1954 (Case 6).

ably in size. She was referred for surgery at this time. Thoracotomy on May 28, 1954, revealed a nodule, 2 cm. in diameter, in the right middle lobe near the fissure between the upper and mid-

dle lobes. The tumor was removed by wedge resection, and a frozen section diagnosis was made of metastatic adenocarcinoma. The right upper and middle lobes were removed. She had an uneventful postoperative course. She was living and doing well in January 1966, over 11 years following resection.

## SUMMARY

Solitary pulmonary nodules are frequently malignant. Thoracotomy should be performed and the lesion removed for frozen section diagnosis unless there is roentgenographic evidence of diffuse or concentric calcification or unless the lesion can be proven to have been present for four or five years without appreciable change in size. A solitary pulmonary metastasis may be treated as a primary bronchogenic carcinoma if the primary lesion has been adequately treated. ★★★

514-A E. Woodrow Wilson Dr.

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## TOLERANT TIPLER

The red-nosed gentleman consulted his physician because he hadn't been feeling up to par. After listening to his patient's complaints, the doctor said, "I can't diagnose your case finally at the moment, but I think it's drink."

"Oh, that's all right, doctor," the patient replied. "I'll come back when you're sober."

—James Ward in the *Jackson Daily News*



# Clinicopathological Conference LXXV

Conducted by the Department of Pathology  
University of Mississippi School of Medicine  
Jackson, Mississippi

THIS WAS THE THIRD UMC admission for this 1-year-old colored female who as a newborn (age 2 days) was admitted for hemolytic disease of the newborn and was treated with two exchange transfusions. The second admission was at the age of 1 month when she was admitted to the UMC with a diagnosis of enterocolitis with dehydration and acidosis. At this time she was given a transfusion of whole blood.

On the third and final admission the child was admitted through the emergency room with a history of five days' illness with the following sequence: five days prior to admission, watery, green stools were noted and were treated by the mother with home remedies, and there was clearing of the diarrhea. Four days prior to admission the child had fever and anorexia. Two days prior to admission she had continued fever and continued anorexia and received one-fourth of an adult aspirin. The day of admission the child had fever and vomiting twice and was carried to a local physician and was given medication for fever and for infection. The afternoon of the date of admission, she had a "jerking spell" and was carried back to her local physician who referred the patient here for diagnosis, evaluation, and treatment as indicated.

## PHYSICAL EXAMINATION

Physical examination revealed a poorly developed, poorly nourished, extremely pale, lethargic colored female who had clonic and tonic movements of the upper extremities. Pulse was 140, respiration 36, and temperature 101 rectally. There was poor skin turgor. The head, eyes, ears, nose, and throat were negative except for pale mucous membranes. The fontanels were tight. The lungs were clear. The neck revealed a meningismus. The heart revealed tachycardia without mur-

mur. The liver was down 2 cm. The genitalia were within normal limits. A neurological examination showed the child was extremely lethargic, responding only to painful stimuli. With the exception of mild clonic and tonic movements of the upper extremities, the child was generally hypotonic.

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*CPC LXXV concerns a 1-year-old colored female admitted for the third time to the University Medical Center. Her first admission was at the age of 2 days for hemolytic disease of the newborn. She was treated with two exchange transfusions. The second admission was at the age of 1 month; the diagnosis was enterocolitis with dehydration and acidosis. On the third and final admission the child had a history of five days' illness with symptoms of watery, green stools, fever, anorexia, and vomiting.*

*Discussers are Dr. Blair Batson, Dr. Margaret Batson, and Dr. Carl Evers.*

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## LABORATORY DATA

Initial hemoglobin was 2.8 gm. per cent; hematocrit, 10 vol. per cent; WBC 18,700 (differential: 5,610 lymphocytes, 11,968 segmented neutrophils, 561 bands, 561 metamyelocytes. On peripheral smear there were toxic changes in all cells.). Stool was 1+ for occult blood; the blood type was B Rh positive. A lumbar puncture revealed cells of 50 per cent polymorphonuclear cells and 50 per cent lymphocytes. There were red blood cells, 338/cu. mm. The cerebrospinal fluid revealed a protein of 152 mg. per cent; a glucose of 93 mg. per cent, and a chloride of 132 mg. per cent (with IV fluids running). Blood

chemistries revealed BUN 23 mg. per cent, chloride 105 mEq/L, CO<sub>2</sub> 18 mEq/L; potassium 5.4 mEq/L, sodium 139 mEq/L, and glucose 117 mg. per cent. Total serum protein was 6.3 gm. per cent, albumin was 3.5 gm. per cent, and globulin 2.8 gm. per cent. A urinalysis on Sept. 16, 1964, was reported as yellow, pH 5.0, specific gravity QNS, protein or glucose—0; white blood cells 5-10, red blood cells 0-3, casts (LPF) moderate hyaline, few granular. There was no growth on culture of blood or feces.

### COURSE IN HOSPITAL

The child was admitted with possible meningitis and also enterocolitis. She was placed in a Croupette with moisture and oxygen, and Gantrisin, Chloramphenicol, and penicillin intravenously were begun. The child was digitalized and remained on intravenous fluids. She began to have a convulsion while on the ward and was begun on phenobarbital and Dilantin. Transfusion was carried out with 75 cc. of packed red cells. Hemoglobin following transfusion was 4.6 gm. per cent.

The child continued to deteriorate, calcium gluconate was given (3 cc. diluted to 10 cc. with saline) in the attempt to control seizures, and she was given cortisone 25 mg. IM. In spite of this the child's course was generally downhill. She never became responsive and developed terminal gastrointestinal bleeding and gasping respirations. The child expired at 11:25 p.m., Sept. 16, 1964.

*Dr. Blair Batson:* "This was the third UMC admission of this 1-year-old colored female child who was first admitted to this hospital with hemolytic disease of the newborn and treated with two exchange transfusions. The second admission was at the age of one month with the diagnosis of enterocolitis with dehydration and acidosis. In addition to the usual fluid and electrolyte therapy, she was given a transfusion of whole blood. I will assume that her hemoglobin was low again—certainly many children with hemolytic disease of the newborn do continue to have some anemia. Following exchange transfusions most infants are left with a hemoglobin somewhat lower than the normal newborn possesses.

"We did not see her again until this admission. Five days prior to admission, watery green stools were noted which were treated with home remedies with resultant clearing of the diarrhea. Four days prior to admission the infant had fever and anorexia. Two days later she continued to have

fever and anorexia. She received one-fourth of an adult aspirin tablet. On the day of admission the patient was said to have vomited twice. She was carried to her physician who gave medication for fever and infection. That afternoon she had a jerking spell after which her physician referred the patient here.

### HEMOLYTIC DISEASE

"Here then is an infant who had hemolytic disease of the newborn, came back fairly quickly with enterocolitis and anemia, and was seen again at one year of age with a short episode of diarrhea followed by fever, anorexia, and slight vomiting. The child did have iron prescribed for her when she left the hospital after the second admission. Whether it was taken or not is not known. There is no information specifically about her iron intake or her vitamin C intake, but it is said that she took baby food.

"The physical examination revealed a poorly developed, poorly nourished, extremely pale, lethargic colored baby who was having clonic and tonic movements of the upper extremities. Pulse was 140/min, respiration 36/min, temperature 101°F. per rectum and weight 15 lb. and 10 oz., which is a bit on the small side. The head was 43 cm. in circumference and the chest 42 cm. in circumference. Both of these figures are just below the third percentile for age. There was poor skin turgor.

"The head, eyes, ears, nose, and throat were normal except for very pale mucous membranes. The fontanel was tight. I will call your attention immediately to the discrepancy between this finding and the infant's apparent dehydration. Certainly we expect the fontanels to be depressed in dehydration. I presume that this apparently comatose infant was examined while in a supine position. The existence of a tight fontanel would be more certain if the head were examined while upright.

### STATUS OF LUNGS

"The lungs were clear to percussion and auscultation. The presence of meningismus is suggestive that the meninges were irritated. There was tachycardia without a heart murmur. The liver was palpable below the left costal margin. This was probably within normal limits although there must have been some thought that it might have been enlarged since therapy for congestive heart failure was instituted. The genitalia were within normal limits. A neurological examination revealed extreme lethargy responding only to painful stimuli.



I would interpret this to indicate that she must have been comatose. With the exception of the mild clonic and tonic movements of the upper extremities, the infant was generally hypotonic.

"The findings in a small, indeed poorly developed, poorly nourished infant with a stiff neck of a tight fontanel in the presence of dehydration, clonic and tonic movements and general hypotonicity leads me to think of a good many possibilities. Obviously these findings point strongly to the central nervous system. One diagnosis we do think about in dehydrated babies, particularly if they have had diarrhea, is hypertonic dehydration. In this situation cerebral hemorrhages and cerebral thrombosis may occur. However, in this patient the clinical examination of the skin did not reveal the doughy sort of subcutaneous tissue that is not infrequently seen in association with hypertonic dehydration.

### ASPIRIN POISONING

"Another possibility that always comes to mind is aspirin poisoning. We do see patients who are poisoned with aspirin whose parents say they have only given one dose of aspirin but who indeed later admit to have given a great deal more than that. However, I would have thought that if this child were poisoned in this way the Kussmaul respirations of severe acidosis would certainly have been present.

"One must consider subdural hematoma as a possibility as well as thrombosis within the brain or the sinuses. Since this was a pale Negro child with central nervous system symptoms we must immediately consider the possibility of sickle cell disease in the etiology. CNS thromboses and hemorrhages and anemia all may occur in patients who have this disorder. The initial hemoglobin was tremendously reduced at 2.8 gm. and the hematocrit of 10 vol. per cent. The peripheral smear showed 4 plus hypochromia, 2 plus polychromia, 1 plus macrocytosis, 2 plus microcytosis, and 3 plus anisocytosis. There was no reticulocyte count done, and there is no mention of nucleated red blood cells. The WBC was 18,700 with an increased number of segmented cells. There were toxic changes in all these cells.

"The stool was 1 plus for occult blood. The protocol states the diarrhea cleared; therefore, I will assume that the dehydration was on the basis of anorexia and vomiting. The blood type was B Rh positive. A lumbar puncture revealed 8 white blood, which were half polymorphonuclear cells and half lymphocytes and 338 red blood cells per cu. mm. We have no information as to

whether these were fresh or crenated. The cerebrospinal fluid revealed a protein of 152 mg. per cent, which is certainly quite elevated, a glucose level of 93 mg. per cent, which is most likely a reflection of the IV fluids being infused at the time the lumbar tap was done, and a chloride of 132 mg. per cent, which is slightly above the upper limits of normal for this age child. Red blood cells of 338 cu. mm. would hardly raise the cerebrospinal fluid protein more than about 10 mg. per cent. The high chloride could be related to IV fluids, but in terms of what we see on the serum electrolytes this doesn't hold.

"Blood chemistries revealed a BUN of 23 mg. per cent which is probably a reflection of the dehydration, a chloride within normal limits of 105 mEq/L, a slightly decreased CO<sub>2</sub> combining power of 18 mEq/L, potassium of 5.4 mEq/L, a sodium of 139 mEq/L and a glucose of 117 mg. per cent. The total serum protein albumin and globulin levels were within normal limits. One urinalysis done on the day after admission and one on the day of death revealed a pH of 5, no protein or glucose and some increase in white blood cells and both hyaline and granular casts. No urine culture was done. There was no growth on the culture of blood or feces and there is no report available of the cerebrospinal fluid culture.

### CNS BLEEDING

"I should add one other comment. On the initial laboratory slip the platelets were described as being slightly decreased. If they had said normal, I would be in better position. The possibility of the platelets being markedly reduced brings up the possibility of bleeding into the central nervous system. CNS bleeding in a 1-year-old infant always brings scurvy to mind. We do not know whether the child had a good vitamin C intake or not. Scrobatic infants may have an associated megaloblastic anemia. Dr. Gussie Higgins has clearly pointed out to us recently that in severe megaloblastic anemia the platelets may be decreased sufficiently to cause active bleeding. No macrocytes were described on the blood smear, which does not rule out megaloblastic anemia however. There were none of the more usual signs of scurvy. A sickle cell preparation was done on the first admission when she was a month old, which was negative. This was not repeated on this admission. No sickle cells were described on the smear. Here is a child more anemic than we almost ever see in our hospital. Our evidence is not sufficient to determine whether this was a more acute episode or a chronic

sort of thing. The possibility of pyelonephritis is raised by the finding of casts in the urine.

"On the basis of the stiff neck, fever, and CSF findings the admitting house officer thought that she might have meningitis, and she was treated accordingly. The child also was digitalized presumably because of the combination of severe anemia and possible congestive failure. Intravenous fluids were given for the dehydration. She had convulsions after admission, and she was given phenobarbital and Dilantin. She was transfused with 75 cc. of packed red cells; hemoglobin following transfusion was 4.6 gm. per cent.

"The infant continued to deteriorate. Calcium gluconate was given in an unsuccessful attempt to control the seizures. The child was given cortisone 25 mg. IM. In spite of this, the child's course was generally downhill. Intermittent seizures continued. The patient never became responsive. No subdural tap was performed. She developed terminal gastrointestinal bleeding and expired the next day.

#### VENOUS SINUS THROMBOSIS

"In older days we would have thought quite seriously about a venous sinus thrombosis in such a patient. Here is an infant who is very poorly developed and poorly nourished, one might say marasmic. The combination of diarrhea, anemia, and marasmus certainly has led to cerebral thrombosis in many infants. Which sinus is involved determines the symptoms or signs one might find. Thrombosis of certain sinuses may give rise to marked spasticity with almost decerebrate rigidity or to other easily recognized signs. Yet if this has happened fairly recently in the superior longitudinal sinus, there may be no external signs to be discovered. There is usually increased protein in the cerebrospinal fluid and frequently hemorrhage within the brain substance or into the spinal fluid. Death is the most common outcome. Many of these thromboses are infected or septic in type. There is not a positive blood culture but as we have seen repeatedly if the original inoculum is not 10 cc. or more of blood we may very well miss a true septicemia. I think we do have to seriously consider the possibility of a cerebral venous sinus thrombosis in this patient. I don't see how I can absolutely rule out sickle cell disease with cerebral thrombosis and therefore must list it as a lesser possibility without some definite evidence.

"A subdural hematoma is a very good possibility. What the etiology might be is not clear. If the infant does indeed have markedly decreased platelets, of course, the child might bleed anywhere from this cause and the subdural space is as good as any. The high protein and the cells in the spinal fluid all may be found associated with a subdural hematoma.

#### CACHECTIC PURPURA

In the older textbooks there is described a disorder associated with marasmus and diarrhea called cachectic purpura. People have thought that this purpura was due to increased capillary permeability, but I don't think that this has even been documented in terms of modern hematological techniques. The low hemoglobin may be related to a basic iron deficiency anemia or perhaps nutritional megaloblastic anemia and may not be related to the CNS symptoms. Of course, if the patient had a large subdural hematoma, she would lose some blood in this manner but not to the degree that has occurred here.

"The terminal gastrointestinal bleeding might be related to gastrointestinal ulcerations which do occur in patients who have central nervous system disease. She did not have uremia which is another cause of terminal gastrointestinal bleeding. We have no indication that she had leukemia which is another cause of terminal gastrointestinal bleeding. On the other hand we still aren't sure about what her platelet count was. I will say the most tempting diagnosis to me is either a subdural hematoma or a sinus thrombosis. I have asked Dr. Margaret Batson if she would comment on the case because of the central nervous system signs."

#### SUBDURAL HEMATOMA

*Dr. Margaret Batson:* "In reading this over, the first thing that came to my mind was that this child was a good candidate for a subdural hematoma and possibly not an acute subdural but a chronic one. There are several things in the history that go along with a diagnosis of chronic subdural hematoma. First, the child was malnourished, and she had had several bouts of diarrhea in the past. I think there is something that we tend to forget which is important to remember—the child who has diarrhea for which we can find no reason and which we can't clear up by ordinary means should have subdural taps done because these children with chronic subdurals tend to have intractable diarrhea. I think the low hemoglobin does go along with a sub-



dural hematoma, and I can remember a number of them that we have had to transfuse constantly because of the amount of bleeding. These babies were being tapped obviously, but because of the amount of constant bleeding, they do sometimes have very low hemoglobins.

"The other thing that I think tends to go along with this diagnosis, and I think it is difficult at this point of time to evaluate, is the fact that the circumference of the head is a centimeter larger than the chest. At age one year the measurements should be about equal. Obviously since 80 per cent of the growth of the head is before birth and this is a malnourished child, it could be that the child's chest hasn't grown, but I would be tempted to wonder if the head was larger than it should have been. Of course, the tight fontanelles also do point in this direction.

### CELL COUNT

"As far as the cell count goes, I went back and looked up again this morning to be sure. I didn't have a chance to look Sidney Carter's article up, but I did look up Dr. David Clark's and he states categorically that any cell count over 5 is abnormal and any polymorphonuclear cell in the spinal fluid is abnormal. Unfortunately, if you turn to the back of the same textbook the figures are a little different which makes it a little confusing. They put it more on an age basis, but I do know that Dr. Clark is accepted pretty universally. I think most pediatric neurologists will go along with Dr. Clark's figures.

"Aside from the obvious diagnosis of sinus thrombosis, the other thing that I thought would be a possibility is porencephaly in this child with a malformation of the brain, a cyst containing fluid under pressure. These children often are poorly nourished—their appetites are poor. Their fontanelles are full. Usually they have some other localizing neurological signs, but since this child was so uncooperative and comatose at the time she came in we can't really tell much about the neurological signs because she was unable to cooperate with examination.

"As far as the sinus thrombosis goes, I think, as Dr. Batson said, that all the signs and symptoms could point to it. If this had happened, I would think it would have been fairly recent and not chronic because the chances of her surviving this kind of an incident are pretty poor. Most of these children die shortly after the thrombosis although we have one famous case in this hospital where there was a thrombosis of the great

vein of Galen. As far as I know, this child is still with us some nine years after her first admission. However, I did talk at some length to both Dr. Buchanan and Dr. Ford about that particular child at that time and they agreed that survival following this was very rare indeed."

*Dr. Blair Batson:* "Was a retinoscopy done? The reason I ask this is that many children with subdural hematoma have hemorrhages in the eye grounds."

*Answer:* "Apparently not."

### AUTOPSY FINDINGS

*Dr. Carl Evers:* "We included this case as a CPC because it is rather unusual. I think it is the only one that we have seen at autopsy at the University Medical Center. At autopsy the infant was poorly developed and malnourished. The right lung weighed 85 gm. and the left lung 55 gm. There was a right upper lobe pneumonia. The right upper lobe was almost completely consolidated with a fibrinous exudate over the surface. Grossly this appeared to be a lobar pneumonia because there was uniform involvement of the entire lobe. However, microscopically we don't think this is a lobar pneumonia in the usual sense, the term confluent bronchopneumonia is more applicable.

"Some areas showed masses of fibrin in the alveoli, while others were filled primarily with a cellular exudate. Other areas showed primarily inflammatory edema, congestion, and hemorrhage. In other words this process was not uniform throughout. In many areas, the bronchi were primarily involved. We believed this to be a confluent bronchopneumonia involving primarily the right upper lobe. *Proteus* organisms were isolated from postmortem culture of the lung. It wasn't included in the protocol, but *Proteus* was also isolated from a throat culture. I don't know whether they are related, but on the child's previous admission, *Proteus* was isolated from a throat culture.

### LIVER

"The liver weighed 855 gm., which is about normal, and other than small foci of fatty infiltration, was unremarkable. We can't explain the terminal gastrointestinal hemorrhage. The prosecutor found no blood within the gastrointestinal tract, and there was congestion of the bowel, but no hemorrhage. The abdominal and thoracic lymph nodes were enlarged, somewhat hyperemic, and fleshy. The spleen weighed 47 gm. which is a little large for an infant of this size. Microscop-

ically, the spleen and the lymph nodes showed a fairly striking extramedullary hematopoiesis which was probably due to the severe anemia. The bone marrow showed marked hypercellularity, with an increase in both erythroid and myeloid elements.

"There was a diffuse subarachnoid hemorrhage over the superior surface of both cerebral hemispheres, but there was no subdural hemorrhage. The entire superior longitudinal sinus was thrombosed, as well as many of the veins over both cerebral hemispheres draining into the longitudinal sinus. Microscopically, this was a very characteristic bland thrombus, with no evidence of inflammation. There was no evidence of a local infection such as otitis or sinusitis. Microscopically there was intense congestion of the veins and capillaries over the cerebral cortex and within the brain over the superior aspect. There was subarachnoid hemorrhage, with multiple, small petechial hemorrhages within the brain. There was early necrosis of the cerebral cortical neurons, but this process undoubtedly occurred quite recently, probably related to this terminal episode of a couple of days. The entire process involved only both cerebral hemispheres superiorly, in the distribution of the venous drainage to the superior longitudinal sinus. There was no morphologic evidence of enterocolitis. The postmortem blood culture was negative.

#### FINAL DIAGNOSIS

"Our final diagnosis is superior longitudinal sinus thrombosis with early infarction of both cerebral hemispheres, right upper lobe bronchopneumonia due to *Proteus*, malnutrition, dehydration, and anemia. The etiology of the anemia is not completely definite.

"When one talks about sinus thrombosis, one must consider primary and secondary types, with

the secondary type associated with infection. In the majority of these, there is a local process, such as thrombosis of the lateral sinus associated with middle ear infection, of the longitudinal sinus associated with frontal sinusitis, cavernous sinus thrombosis due to infection, etc. This child had none of these. In others, there is a more remote infection, but these, and the primary type, all have in common many of the findings in this patient, with anemia, dehydration, malnutrition, and poor development. As Dr. Batson mentioned, they are usually marasmic infants and the exact cause of the thrombosis is not well understood. Are there any questions?"

#### SICKLE CELLS

*Question:* "In terms of the extramedullary hematopoiesis, wouldn't this be more in keeping with a hemoglobinopathy or with sickle cell disease?"

*Dr. Evers:* "Yes, it would. Extramedullary hematopoiesis of this degree, in infants, is not usually seen with iron deficiency anemia. However, there was no evidence of other diseases associated with it, such as congenital syphilis, leukemia, or sickle cell disease."

*Question:* "Do you usually see sickled cells in postmortem material?"

*Dr. Evers:* "No, it is difficult. If one finds many sickle cells, in various tissues in postmortem preparations, one can strongly suspect a sickle cell crisis, but this is not really an autopsy diagnosis, unless one has other changes in the marrow, spleen, and bone, which this child did not have. No sickle cells were present."

*Question:* "Was the sickle cell preparation recorded as negative in the chart, or just was not done?"

*Dr. Blair Batson:* "There was one done when she was a month old, which was negative. None was done on this admission." ★★★

2500 N. State St.

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#### HOUSE RULES

At an English hostel visited by young people from many nations, a prominently displayed sign contained these instructions:

"Americans and Australians are kindly requested to turn in before 2:00 a.m.—Germans are asked not to get up before 6:00 a.m.—Italians are requested not to sing after 10:00 p.m."



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# Radiologic Seminar XLVIII: Volvulus of the Sigmoid Colon

ELMER J. HARRIS, M.D.  
Jackson, Mississippi

ACUTE FORMS OF VOLVULUS or torsion have been reported in all segments of the colon, but the sigmoid and right colon are sites of predilection. Sigmoid volvulus is more frequent in European countries, particularly Russia and Scandinavia. In this country, a higher incidence is seen in the Negro race and also in mental and elderly patients. Chronic constipation, poor bowel habits, and high residue diets may well play an important part.

A long and freely movable sigmoid loop is necessary for the occurrence of volvulus. Obstruction associated with sigmoid volvulus will vary somewhat, depending upon whether the proximal or distal components of the sigmoid loop undergo torsion or whether both limbs participate in the pathological rotation, the latter more frequently occurring.<sup>1</sup> Some authors believe that a shrinking mesenteritis<sup>2</sup> resulting in closer approximation of the basal fixation points of the sigmoid loop is an important contributory factor, while other authorities feel that the mesenteritis itself is the result of previous episodes of torsion.

In younger individuals, sigmoid volvulus may develop rapidly with symptoms of generalized cramping, abdominal pain and vomiting with the full symptom complex possibly developing in less than a 24-hour period. In older patients the onset is slower so that the patient may not be seen by a physician for several days. Scout radiographs (Figure 1) of the abdomen will usually show a

grossly distended sigmoid loop arising from the pelvis in a vertical or oblique direction, often reaching to the diaphragm. The loops may parallel the ascending and descending colon. Fluid



*Figure 1. In this case of volvulus in a 58-year-old colored man, note the grossly distended loop of gas-filled sigmoid extending almost to the diaphragm. In the standing film a fluid level was seen.*

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From the Department of Radiology, Mississippi Baptist Hospital.





Figure 2. In the same patient the barium enema shows the site of volvulus (note arrow). The "corkscrew" type twist with beaked lower segment should be noted.

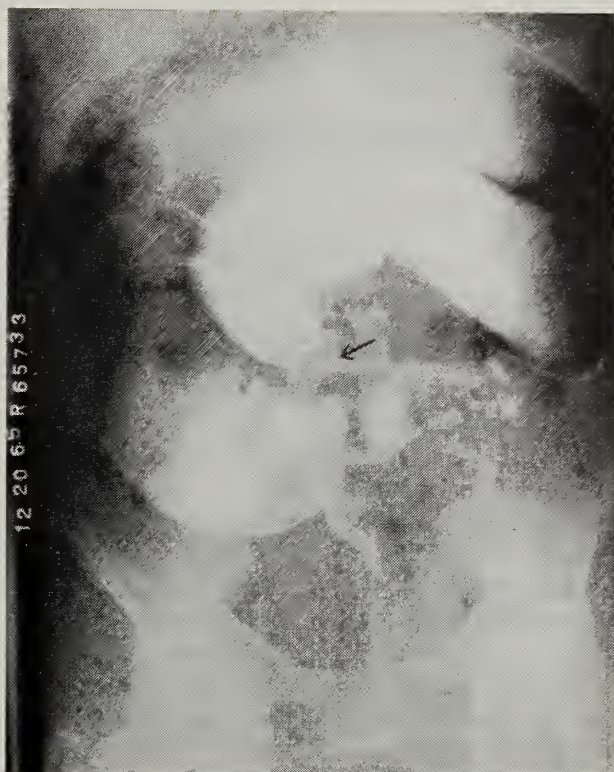


Figure 3. On the postevacuation film both the proximal and distal sites of partial obstruction of the closed loop are demonstrated with it being apparent that the barium was retained in this loop.

quickly accumulates in the obstructed loop, and there is usually a loss of haustrations. About one-third of the cases will present atypical findings, depending upon whether the proximal or distal components of the loop or both undergo the torsion. A barium enema examination (Figure 2) will demonstrate the site of the distal obstruction and the effects of the torsion on the mucosal pattern, this presenting a "corkscrew twist" arrangement<sup>3</sup> which has been described as resembling an eagle's beak or snake's head. The barium may pass this site of partial obstruction and fill the distended loop, in which case it cannot be expelled (Figure 3).

Prompt surgical intervention is usually indicated, although the value of nonoperative treatment has been emphasized by Hamlin.<sup>4</sup>

## SUMMARY

Two-thirds of the cases of sigmoid volvulus will present a characteristic roentgen pattern suggested by plain films of the abdomen, which will show a grossly distended sigmoid loop arising from the pelvis. Examination with barium enema is usually indicated for confirmation. ★★★

1190 N. State Street

## REFERENCES

1. Figiel, L. S., and Figiel, S. J.: Sigmoid Volvulus, *American J. Roentgenol.* 81:683-693, 1959.
2. Figiel, L. S., and Figiel, S. J.: Lesions of the Large Intestine Producing Acute Symptoms, *Radiologic Clin. N. Amer.* 2:30 through 33-54, 1964.
3. Meschan, I.: *Roentgen Signs in Clinical Diagnosis*, Philadelphia and London: W. B. Saunders Company, 1956, p. 963.
4. Hamlin, E., Jr.: Non-operative Reduction of Acute Volvulus of Sigmoid, *New England J. Med.* 247:835-837, 1952.

## BIG SWITCH

The disturbed kangaroo went to see his psychiatrist. "Doctor," he said, "I just don't know what's wrong with me. I'm not jumpy lately."



## 'Singing Doctors' Head Fun Bill at May Meet

Six extroverted physicians—four surgeons, an internist, and a pathologist—the famous Greene County (Mo.) "Singing Doctors" will have top entertainment billing at the Mississippi State Medical Association's 98th Annual Session. They will appear during the Latin American Fiesta on May 11.

Headed by surgeon James T. Brown, the organizer, emcee, lyricist of the group, the famed sextet's sole earnings come from the sale of its record albums, three of which have been issued with total sales zooming into the tens of thousands.

The money isn't making doctors rich but making new doctors, because every cent of income is put into the Greene County Medical Society Medical Scholarship Fund which is supporting 101 students in approved medical schools.

In addition to Dr. Brown, the group includes surgeons Charles E. Lockhart, Don F. Gose, and F. T. H'Doubler, internist Harold H. Lurie, and

pathologist Fred C. Collier. All are from Springfield, Mo., where they are engaged in private practice. Annually, they devote more than a month a year to making appearances before medical meetings.

Dr. Brown said that the group got started years ago when he was made program chairman of the local society's annual party but given no funds with which to secure entertainment.

"As a last resort," Dr. Brown concedes, "I searched around for five more extroverts, wrote half a dozen parodies kidding the life and the work of the doctor, and mounted the stage with trembling knees and great misgivings."

The premiere was an unqualified success, and it was only logical that recording the medical ditties would be one also. The only trained voice in the sextet is that of Dr. Lockhart. The rest say that they "wing it and hope for the best."

Famous among the Singing Doctors numbers are "Halitosis Beats No Breath at All," "I'm Oh So Bloated 'Cause I Passa No Gas," "I'm a Specialists," "We Give Green Stamps," and "Pentothal Is a Ball." The three available albums contain nearly 40 such selections.

The feature entertainment presentation will occupy almost an hour during the Wednesday evening, May 11, south-of-the-border gala at Jackson.



*Top billing at the 98th Annual Session's entertainment goes to the famous Greene County Singing Doctors. From the left, they are Drs. F. T. H'Doubler,*

*Don F. Gose, Fred C. Collier, Jim Brown, Harold H. Lurie, and Charles E. Lockhart, all of Springfield, Mo.*



# 98th Annual Session

Mississippi State Medical Association  
Jackson, May 9-12, 1966

THE MEDICAL CAPITAL of Mississippi, Jackson, is the site of the association's 98th Annual Session which convenes May 9-12, 1966. The seven scientific sections, meeting in general sessions, a special scientific symposium of national repute, and more than 25 specialty society, fraternal, and alumni meetings will be compressed into the four-day meet. Association spokesmen characterized the program as a new high in intensive postgraduate opportunity. Headquarters is the Hotel Heidelberg.

Dr. Everett Crawford of Tylertown, association president, will address the House of Delegates when it meets Monday morning, May 9. Also to be presented are annual reports and resolutions. To minimize conflict with scientific activities, all reference committees of the House will meet Monday afternoon, leaving the remainder of the week free of business demands up to the adjourned meeting of the House on Thursday.

Election of 1966-67 officers will highlight closing ceremonies as Dr. James T. Thompson of Moss Point is inaugurated president. All scientific and program activities are under the supervision of Dr. James L. Royals of Jackson, chairman of the Council on Scientific Assembly. Drs. Howard A. Nelson of Greenwood and William E. Lotterhos, speaker and vice speaker, respectively, will preside over meetings of the House.

The Woman's Auxiliary will conduct its 43rd Annual Session May 9-11, also headquartering at the Heidelberg. Mrs. J. Hurd Gaddy of Long Beach is president, and Mrs. J. Gordon Dees of Jackson is president-elect. General chairman for the session is Mrs. Jim G. Hendrick of Jackson.

Highlighting the Scientific Assembly is a Symposium on Nuclear Medicine, jointly sponsored by the United States Atomic Energy Commission and

the association. Social high point comes Wednesday with the Latin American Fiesta on Wednesday evening. Medical alumni occasions are scheduled.

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## OFFICIAL CALL

To all members of the Mississippi State  
Medical Association

The 98th Annual Session of the Mississippi State Medical Association is called to meet at Jackson, Mississippi, on Monday, May 9, 1966, pursuant to Article V of the constitution. The House of Delegates will be convened at 9:00 o'clock a.m. at the Hotel Heidelberg.

The Scientific Assembly, consisting of the general sessions and the Symposium on Nuclear Medicine, will meet during the period May 10-12, 1966.

No member or guest will be permitted to participate in any aspect of the annual session until regularly registered.

EVERETT CRAWFORD  
PRESIDENT

JAMES L. ROYALS  
SECRETARY-TREASURER

---

The technical and scientific exhibits will be presented in the Heidelberg's Olympic Room, largest such facility in the state, with major scientific and business meetings in the adjacent Victory Room. Annual session officials urged all who have not yet done so to secure hotel reservations.

STATE OFFICERS 1965-66



DR. CRAWFORD

PRESIDENT  
EVERETT H. CRAWFORD, M.D.  
Tylertown

PRESIDENT-ELECT  
JAMES T. THOMPSON, M.D.  
Moss Point

SECRETARY-TREASURER  
JAMES L. ROYALS, M.D.  
Jackson



DR. THOMPSON

VICE PRESIDENTS	JOHN G. EGGER, M.D., Drew ARTHUR A. DERRICK, JR., M.D., Durant ARCHIE C. HEWES, M.D., Gulfport
EDITOR	W. MONCURE DABNEY, M.D., Crystal Springs
ASSOCIATE EDITORS	GEORGE H. MARTIN, M.D., Vicksburg THOMAS W. WESSON, M.D., Tupelo
SPEAKER	HOWARD A. NELSON, M.D., Greenwood
VICE SPEAKER	WILLIAM E. LOTTERHOS, M.D., Jackson
AMA DELEGATES	J. P. CULPEPPER, JR., M.D., Hattiesburg GEORGE E. TWENTE, M.D., Jackson
EXECUTIVE SECRETARY	ROWLAND B. KENNEDY, Jackson
ASSISTANT EXECUTIVE SECRETARY	CHARLES L. MATHEWS, Jackson

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JOHN B. HOWELL, JR., M.D., Canton, Chairman  
LAMAR ARRINGTON, M.D., Meridian, Vice Chairman  
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W. E. MOAK, M.D., Richton  
G. SWINK HICKS, M.D., Natchez



## LIVING PAST PRESIDENTS

1940-1941 . . . . .	WILLIAM H. ANDERSON, M.D., Booneville
1941-1942 . . . . .	A. STREET, M.D., Vicksburg
1943-1944 . . . . .	E. LEROY WILKINS, M.D., Clarksdale
1946-1947 . . . . .	J. K. AVENT, SR., M.D., Grenada
1948-1949 . . . . .	R. B. CALDWELL, M.D., Baldwin
1949-1950 . . . . .	B. B. O'MARA, M.D., Biloxi
1950-1951 . . . . .	B. S. GUYTON, M.D., Oxford
1951-1952 . . . . .	JAMES GRANT THOMPSON, M.D., Jackson
1952-1953 . . . . .	LAMAR ARRINGTON, M.D., Meridian
1953-1954 . . . . .	M. Q. EWING, M.D., Amory
1955-1956 . . . . .	S. LAMAR BAILEY, M.D., Kosciusko
1956-1957 . . . . .	H. C. RICKS, M.D., Jackson
1957-1958 . . . . .	HOWARD A. NELSON, M.D., Greenwood
1958-1959 . . . . .	GUY T. VISE, M.D., Meridian
1959-1960 . . . . .	STANLEY A. HILL, M.D., Corinth
1960-1961 . . . . .	G. SWINK HICKS, M.D., Natchez
1961-1962 . . . . .	LAWRENCE W. LONG, M.D., Jackson
1962-1963 . . . . .	C. P. CRENSHAW, M.D., Collins
1963-1964 . . . . .	JOHN G. ARCHER, M.D., Greenville
1964-1965 . . . . .	OMAR SIMMONS, M.D., Newton

## ACTIVITIES CALENDAR

### REGISTRATION

General registration for the Scientific Assembly and House of Delegates will be located in the Victory Foyer, the Heidelberg. No person will be admitted to any activity of the Annual Session without first registering. The Secretary's Office will also be located in the Victory Foyer. Hours of registration will be 8:00 a.m. to 5:00 p.m. Monday through Wednesday and 8:00 a.m. to 2:00 p.m., Thursday.

### SUNDAY, MAY 8, 1966

- 2:30 p.m. Miss. Association of Pathologists, Silver Room
- 6:30 p.m. Fellowship Hour and Banquet, Miss. Association of Pathologists, Rose Room
- 6:30 p.m. Miss. Society of Anesthesiologists, Dinner, Primos' Northgate Restaurant

### MONDAY, MAY 9, 1966

- 8:30 a.m. Committee on Trauma, American College of Surgeons, Silver Room
- 9:00 a.m. House of Delegates, Victory Room
- 9:00 a.m. Miss. Association of Pathologists, Rose Room
- 12:00 noon American College of Surgeons Luncheon, Heidelberg Roof
- 12:00 noon Miss. Orthopaedic Society, Miss. Baptist Hospital
- 2:00 p.m. Reference Committee on Reports of Officers and Board of Trustees, Victory Room
- 2:00 p.m. Reference Committee on Miscellaneous Business, Parlor B
- 3:30 p.m. Council on Constitution and By-Laws, Silver Room
- 3:30 p.m. Reference Committee on Medical Practices, Parlor A
- 3:30 p.m. Woman's Auxiliary, Preconvention Executive Board, Parlor B
- 7:00 p.m. Miss. Orthopaedic Society, River Hills Club
- 7:00 p.m. University of Tennessee Medical Alumni, Heidelberg Roof
- 7:00 p.m. The Tulane University Medical Alumni, Silver and Rose Rooms

### TUESDAY, MAY 10, 1966

- 8:00 a.m. Woman's Auxiliary, Continental Breakfast, Silver Room
- 9:00 a.m. Woman's Auxiliary, General Session, Rose Room



- 9:00 a.m. General Scientific Session, Victory Room
- 11:30 a.m. Miss. Ob-Gyn Society, Fellowship Hour and Luncheon, Silver Room
- 12:00 noon Fifty Year Club Luncheon, Parlor B
- 12:00 noon Flying Physicians Association Luncheon, Parlor A
- 12:30 p.m. Miss. Society of Internal Medicine Luncheon, Heidelberg Roof
- 2:00 p.m. General Scientific Session, Victory Room
- 4:00 p.m. University of Mississippi Medical Alumni, Business Meeting, Silver Room
- 4:00 p.m. Miss. Diabetes Association, Parlor A
- 7:00 p.m. University of Mississippi Medical Alumni, Olympic and Victory Rooms

#### WEDNESDAY, MAY 11, 1966

- 7:30 a.m. Past Presidents' Breakfast, MSMA, Parlor A
- 8:00 a.m. Past Presidents' Breakfast, Woman's Auxiliary, Silver Room
- 9:30 a.m. Symposium on Nuclear Medicine, Victory Room
- 12:00 noon Woman's Auxiliary Luncheon, Heidelberg Roof
- 12:00 noon Miss. Urological Association, Luncheon, Parlor A
- 12:00 noon Miss. Academy of General Practice, Luncheon, Rose Room
- 1:30 p.m. Miss. Psychiatric Society, Parlor B
- 1:30 p.m. General Scientific Session, Victory Room
- 2:30 p.m. Woman's Auxiliary, Postconvention Executive Board, Heidelberg Roof
- 3:00 p.m. Nominating Committee, MSMA, Open Session, Silver Room
- 6:30 p.m. Latin American Fiesta, All Members and Guests, Olympic and Victory Rooms

#### THURSDAY, MAY 12, 1966

- 8:00 a.m. Southern Medical Association Breakfast, Heidelberg Roof (By Invitation)
- 9:30 a.m. General Session on Pediatrics, Victory Room
- 9:30 a.m. General Session on Eye, Ear, Nose, and Throat, Silver Room
- 12:00 noon American Academy of Pediatrics Luncheon, Heidelberg Roof
- 12:00 noon Section on EENT Luncheon and Business Meeting, Miss. EENT Association, Rose Room
- 1:30 p.m. House of Delegates, Victory Room

#### LATIN AMERICAN FIESTA

Taking the theme from south of the border, the annual association party will be a Latin American Fiesta for members, their ladies, and guests in the Olympic and Victory Rooms, Wednesday evening, May 11, beginning at 6:30 p.m. Special entertainment will be the famous Greene County "Singing Doctors" of Springfield, Missouri. All members of the cast are physicians. Jerry Lane and his Orchestra will furnish music for dinner and dancing afterward. Tickets will be available at general registration in the Victory Foyer.

#### OLE MISS MEDICAL ALUMNI

University of Mississippi medical alumni will meet on Tuesday, May 10. Arrangements for registration at the Heidelberg have been made by alumni officials. The Nominating Committee will meet for luncheon at 12:30 p.m. with Dr. S. Lamar Bailey as chairman. A general business meeting will be conducted at 4:00 p.m. in the Silver Room. A fellowship hour will begin at 7:00 p.m. in the Olympic Room, followed by a buffet dinner at 8:00 p.m. in the Victory Room with dancing afterward. Dr. W. E. Caldwell of Baldwin, president, will preside over the various events, and Dr. James G. Thompson of Jackson is program chairman. Further details and tickets may be secured from Mr. Charles William Price, medical alumni secretary, at the University of Mississippi School of Medicine, Jackson.

#### TENNESSEE MEDICAL ALUMNI

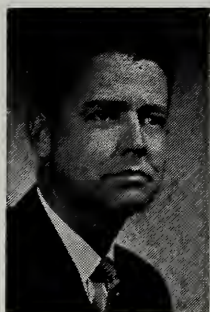
University of Tennessee medical alumni will meet for a fellowship hour and banquet on Monday, May 9, the Heidelberg Roof, beginning at 7:00 p.m. Dr. S. Jay McDuffie of Nettleton is program chairman.

#### TULANE MEDICAL ALUMNI

Medical alumni of the Tulane University will sponsor a fellowship hour at 7:00 p.m. on Monday, May 9, in the Silver Room, the Heidelberg, followed by a banquet in the Rose Room. Dr. James M. Packer of Jackson is program chairman.



## EXECUTIVE BUSINESS



DR. NELSON

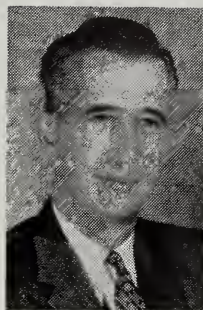
### HOUSE OF DELEGATES

Monday, May 9, 1966  
9:30 a.m.

Hotel Heidelberg  
Victory Room

Howard A. Nelson  
Greenwood, Speaker

William E. Lotterhos  
Jackson, Vice Speaker



DR. LOTTERHOS

### MEETINGS OF THE HOUSE

The meeting will be opened by the President, and the Speaker, in presiding over the House, will announce the order of business. An open session, Monday, May 9, 1966, to which all members and Auxiliary members are invited will feature the Address of the President, Dr. Everett H. Crawford. The adjourned meeting of the House will convene in the Victory Room at 1:30 p.m., on Thursday, May 12.

### REFERENCE COMMITTEES

Reports of Officers and Board of Trustees, Monday, May 9,  
Victory Room, 2:00 p.m.

Medical Practices, Monday, May 9, Parlor A, 3:30 p.m.

Constitution and By-Laws, Monday, May 9, Silver Room, 3:30  
p.m.

Miscellaneous Business, Monday, May 9, Parlor B, 2:00 p.m.

Nominating Committee, Wednesday, May 11, Silver Room, 3:00  
p.m.

## THE SCIENTIFIC ASSEMBLY

### COUNCIL ON SCIENTIFIC ASSEMBLY

JAMES L. ROYALS, CHAIRMAN



DR. ROYALS

### THE COUNCIL

SAMUEL G. MOUNGER, EENT

MAXWELL D. BERMAN, GENERAL PRACTICE

G. SPENCER BARNES, MEDICINE

DANIEL R. THORNTON, OB-GYN

SAMUEL L. BRISTER, PEDIATRICS

J. T. HAMRICK, PREVENTIVE MEDICINE

JACK A. ATKINSON, SURGERY

### THE SCIENTIFIC EXHIBIT

OLYMPIC ROOM

HOTEL HEIDELBERG

### THE TECHNICAL EXHIBIT

OLYMPIC ROOM

HOTEL HEIDELBERG

### CONDUCT OF THE SCIENTIFIC ASSEMBLY

The order of exercise, papers, and discussion as set forth in the official program shall be followed until completion. All papers read before the association shall become its property. Each paper must be read by its author and deposited with the Secretary (or Chairman) when read.



## THE SCIENTIFIC EXHIBIT

Physicians, foundations, and organizations will present the Scientific Exhibit. Physician-members of the Mississippi State Medical Association are eligible for the Aesculapius Award, given for excellence of presentation, quality of content, and originality. This award, a permanent plaque, also offers an honorarium of \$200 and is presented as a joint project of the association and the Mead Johnson Laboratories. Others may not participate in the competition, but they are eligible to receive recognition for outstanding presentations. The Scientific Exhibit is located in the Olympic Room of the Heidelberg.

## EXHIBITORS

"Management of Pedicle Grafts"

Martin B. Harthcock, M.D., Jackson

"Prophylaxis Against Tetanus in Wound Management"

Raymond S. Martin, Jr., M.D., Jackson

"Diagnosis of Cystic Fibrosis"

Wilfred Q. Cole, M.D., Jackson

"Glaucoma Detection"

Mississippi State Board of Health

"Pulmonary Complications from Obstetrics and Gynecology"

Lois M. Mosey, M.D., and Myra D. Tyler, M.D., Jackson

"Syphilis Control"

Mississippi State Board of Health

"Heavy Particles in Experimental Medicine and Therapy"

United States Atomic Energy Commission

"Fallout in Perspective"

United States Atomic Energy Commission

"Thoracic Surgery"

Oscar Creech, Jr., M.D.; Charles Pearce, M.D.; Keith Reemtsa, M.D.; and Robert Schramel, M.D., New Orleans, La.

"Surgical Treatment of Baldness"

John M. Yarborough, Jr., M.D., and James W. Burks, M.D., New Orleans, La.

THE TECHNICAL EXHIBIT

The Mississippi State Medical Association presents with pride the 1966 Technical Exhibit. Established firms engaged in the manufacture and distribution of pharmaceuticals, supplies, equipment, and in providing varied services will present exhibits. Visit each exhibit often and discuss products and services with the Professional Service Representatives. Only registered members and guests are admitted. The Technical Exhibit is located in the Olympic Room, Hotel Heidelberg.

EXHIBITORS	BOOTH
Abbott Laboratories, North Chicago, Ill. . . . .	13
Airkem Service, Inc., Jackson, Miss. . . . .	27
Automated Medical Systems, Inc., Jackson, Miss. . . . .	47
Bentex Pharmaceutical Co., Houston, Texas . . . . .	8
The Borden Company, Pharmaceutical Div., New York, N. Y. . . . .	43
Bristol Laboratories, Syracuse, New York . . . . .	29
The Carnation Company, Los Angeles, Calif. . . . .	4
Ciba Pharmaceutical Products, Inc., Summit, N. J. . . . .	33
The Coca-Cola Company, Atlanta, Ga. . . . .	51
Encyclopaedia Britannica, Inc., Chicago, Ill. . . . .	16
Estate Consulting Service, Jackson, Miss. . . . .	34
Fred Kremp Company, Jackson, Miss. . . . .	48
Gerber Products Company, Fremont, Mich. . . . .	28
Geigy Pharmaceuticals, Yonkers, N. Y. . . . .	10
Hewlett-Packard Co., Sanborn Medical Div., Atlanta, Ga. . . . .	35
Kay Surgical, Inc., Jackson, Miss. . . . .	1
Lanier Company, Jackson, Miss. . . . .	49
Lederle Laboratories, Pearl River, N. Y. . . . .	23
C. DeWitt Lukens Company . . . . .	39
J. A. Majors Company, Dallas, Texas . . . . .	18
McNees Medical Supply Company, Jackson, Miss. . . . .	11
Medical Building Developers, Hattiesburg, Miss. . . . .	45
Merck Sharpe and Dohme, Philadelphia, Pa. . . . .	22



Merrill Lynch, Pierce, Fenner and Smith, Inc., Jackson, Miss. . . .	46
Mississippi Hospital and Medical Service, Jackson, Miss. . . . .	12
Mutual Benefit Life Insurance Co., Newark, N. J. . . . .	5
Ortho Pharmaceutical Corporation, Raritan, N. J. . . . .	19
Parke, Davis and Company, Detroit, Mich. . . . .	50
Pepsi-Cola Bottlers Assn. of Mississippi . . . . .	52
William P. Poythress and Company, Inc., Richmond, Va. . . . .	42
J. B. Roerig and Company, New York, N. Y. . . . .	15
A. H. Robins and Company, Richmond, Va. . . . .	38
Roche Laboratories, Nutley, N. J. . . . .	17
Sandoz Pharmaceuticals, Hanover, N. J. . . . .	40
Schering Corporation, Union, N. J. . . . .	3
G. D. Searle and Company, Chicago, Ill. . . . .	2
Smith, Miller and Patch, Inc., New York, N. Y. . . . .	14
Southern Surgical Supply Co., Inc., New Orleans, La. . . . .	24
E. R. Squibb and Sons, New York, N. Y. . . . .	41
Stuart Company, Pasadena, Calif. . . . .	9
Upjohn Company, Kalamazoo, Mich. . . . .	32
U. S. Vitamin and Pharmaceutical Corp., New York, N. Y. . . . .	21
Winthrop Laboratories, New York, N. Y. . . . .	37

#### SCIENTIFIC GRANTS

Eli Lilly and Company, Indianapolis, Ind.

Merck Sharpe and Dohme, Philadelphia, Pa.

Smith, Kline and French Laboratories, Philadelphia, Pa.

#### REGISTRATION FOR EXHIBIT PRIZES

Visit the Technical Exhibits often and qualify for the drawing of attractive prizes. Obtain necessary initials as you visit each booth. Deposit cards at Registration not later than 12:30 p.m., Thursday, May 12.

SCIENTIFIC PROGRAM

Tuesday, May 10, 1966  
Victory Room  
Beginning at 9:00 a.m.

Daniel R. Thornton, Meridian  
*Chairman*

Chester H. Lake, Jackson  
*Secretary*



DR. THORNTON

LOW DOSAGE CORTISONE AND ESTROGEN THERAPY IN OVARIAN  
DYSFUNCTION

William McK. Jefferies, Cleveland, Ohio

INTRAUTERINE CONTRACEPTIVE DEVICES

Walter A. Bonney, Nashville, Tennessee

VIEW EXHIBITS

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SCIENTIFIC PROGRAM

Tuesday, May 10, 1966  
Victory Room  
Beginning at 10:00 a.m.

Jack A. Atkinson, Brookhaven  
*Chairman*

George E. Gillespie, Jackson  
*Secretary*



DR. ATKINSON

SEMINAR ON CANCER

I

CAUSES AND CHEMOTHERAPEUTIC TREATMENT

Warren N. Bell, Jackson

II

SURGICAL TREATMENT

R. Lee Clark, Houston, Texas

III

RADIOLOGICAL TREATMENT

Lowell S. Miller, Houston, Texas

VIEW EXHIBITS

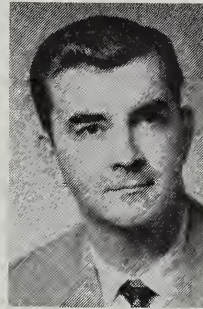


## SCIENTIFIC PROGRAM

Tuesday, May 10, 1966  
Victory Room  
Beginning at 1:30 a.m.

G. Spencer Barnes, Columbus  
*Chairman*

William E. Weems, Laurel  
*Secretary*



DR. BARNES

NEUROPATHIES AND MYOPATHIES OF DIABETES MELLITUS  
Robert D. Currier, Jackson

HYPERTENSION AND ALDOSTERONISM  
Robert Birchall, New Orleans, Louisiana

NEW DIAGNOSTIC AND THERAPEUTIC PROCEDURES IN GOUT  
L. Maxwell Lockie, Buffalo, New York

MANAGEMENT OF MYOCARDIAL INFARCTION  
Harper K. Hellems, Jackson

VIEW EXHIBITS

## Symposium on Nuclear Medicine



UNITED STATES ATOMIC ENERGY  
COMMISSION, WASHINGTON



MISSISSIPPI STATE MEDICAL  
ASSOCIATION, JACKSON

### THE SYMPOSIUM

This special scientific program will bring before Mississippi physicians one of the most distinguished and able group of essayists ever to appear before the association. The Council on Scientific Assembly, joined by the general officers and Board of Trustees, expresses deep appreciation to the United States Atomic Energy Commission and to Dr. H. D. Bruner for making the symposium possible.

### SPECIAL ADJUNCTIVE EXHIBITS

Two special scientific exhibits, located in the Olympic Room, will be presented as an extension of the symposium. The exhibits, under the supervision of Mrs. Betty Lockridge of the Atomic Energy Commission's Division of Biology and Medicine, are:

"Heavy Particles in Experimental Medicine and Therapy"  
"Fallout in Perspective"



## THE SYMPOSIUM

Wednesday, May 11, 1966  
Victory Room  
Beginning at 9:30 a.m.

JAMES L. ROYALS, Jackson  
*Chairman, Council on Scientific  
Assembly, Presiding*

### I

RADIATION: THE INHERENT FACTOR IN OUR ENVIRONMENT (Key-  
note Address)  
Everett Crawford, Tylertown

### II

ROLE OF THE ATOMIC ENERGY COMMISSION IN BIOMEDICAL RE-  
SEARCH  
H. D. Bruner, Washington, D. C.

### III

USES OF ISOTOPES IN DIAGNOSIS: SCANNING  
George V. Taplin, Los Angeles, California

### IV

USES OF ISOTOPES IN THERAPY  
Paul V. Harper, Chicago, Illinois

### V

PROBLEMS OF HOW TO TREAT RADIATION INJURY: CONTRIBUTIONS  
TO GENERAL MEDICINE  
Gould A. Andrews, Oak Ridge, Tennessee

### VI

THE USE OF THE CYCLOTRON AND OTHER HIGH ENERGY SOURCES  
FOR THERAPY IN RESEARCH  
James L. Born, Berkeley, California

### VII

DISCUSSION  
The panel of essayists

SCIENTIFIC PROGRAM

Wednesday, May 11, 1966  
Victory Room  
Beginning at 1:30 p.m.

Maxwell D. Berman, Jackson  
*Chairman*

William M. Dabney, Crystal Springs  
*Secretary*



DR. BERMAN

MY CONCEPTION OF A NEW PHYSICIAN—THE FAMILY PHYSICIAN  
William E. Lotterhos, Jackson

RHEUMATOID ARTHRITIS  
Alfred J. Bollet, Charlottesville, Virginia

MEASLES IMMUNIZATION  
David J. Sencer, Atlanta, Georgia

THE TREATMENT OF OBESITY  
Herbert G. Langford, Jackson

VIEW EXHIBITS

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SCIENTIFIC PROGRAM

Wednesday, May 11, 1966  
Victory Room  
Beginning at 3:30 p.m.

J. T. Hamrick, Jackson  
*Chairman*

Alton B. Cobb, Jackson  
*Secretary*



DR. HAMRICK

HOME HEALTH SERVICES—CHALLENGE AND OPPORTUNITY  
Claire F. Ryder, Washington, D. C.

A RATIONAL APPROACH TO TUBERCULOSIS CONTROL  
Alfonso H. Holguin, Atlanta, Georgia

TECHNIQUES AND PROBLEMS OF PROLONGED FLUID ADMINISTRATION  
James C. Griffin, Jr., Jackson

VIEW EXHIBITS

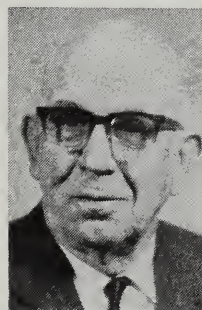


## SCIENTIFIC PROGRAM

Thursday, May 12, 1966  
Victory Room  
Beginning at 9:30 a.m.

Samuel L. Brister, Jr., Greenwood  
*Chairman*

J. Lee Owen, Jackson  
*Secretary*



DR. BRISTER

### ADVANCES IN ANTIBIOTIC THERAPY

Fred Allison, Jackson

### MANAGEMENT OF SEVERE DIARRHEA IN INFANTS AND CHILDREN

Stanley E. Crawford, Memphis, Tennessee

### URINARY TRACT INFECTIONS IN CHILDREN

Guy W. Leadbetter, Jr., Boston, Massachusetts

### VIEW EXHIBITS

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## SCIENTIFIC PROGRAM

Thursday, May 12, 1966  
Silver Room  
Beginning at 9:30 a.m.

Samuel G. Mounger, Greenwood  
*Chairman*

E. M. Herring, Jr., Hattiesburg  
*Secretary*



DR. MOUNGER

### THE SURGICAL TREATMENT OF THE CORNEA

J. Wesley McKinney, Memphis, Tennessee

### INTRACHORDAL INJECTION OF TEFLON AND SILICONE FOR THE CORRECTION OF CHRONIC VOCAL DISABILITY

Godfrey E. T. Arnold, Jackson

### ACOUSTIC TUMORS

Chester W. Masterson, Batesville

### VIEW EXHIBITS

ESSAYISTS



DR. ANDREWS

G. A. ANDREWS, M.D., Oak Ridge, Tennessee. Director, Medical Division, Oak Ridge Institute of Nuclear Studies. Medical Education: University of Michigan, 1943. Diplomate, American Board of Internal Medicine.



DR. BIRCHALL

ROBERT BIRCHALL, M.D., New Orleans, Louisiana. Associate Professor of Medicine, Tulane, University. Medical Education: Columbia University, 1939. Diplomate, American Board of Internal Medicine.



DR. BOLLET

ALFRED JAY BOLLET, M.D., Charlottesville, Virginia. Associate Professor of Internal Medicine and Preventive Medicine, University of Virginia. Medical Education: New York University, 1948. Diplomate, American Board of Internal Medicine.



DR. BONNEY

WALTER A. BONNEY, M.D., Nashville, Tennessee. Acting Chairman, Department of Ob-Gyn, Vanderbilt University. Medical Education: Columbia University, 1954. Diplomate, American Board of Ob-Gyn.



DR. BORN

JAMES L. BORN, M.D., Berkeley, California. Assistant Director, Donner Laboratory, University of California. Medical Education: University of Wisconsin, 1958.



RANDOLPH LEE CLARK, M.D., Houston, Texas. Professor of Surgery, M. D. Anderson Hospital and Tumor Institute, University of Texas. Medical Education: Medical College of Virginia, 1932. Diplomate, American Board of Surgery.



DR. CLARK



DR. CRAWFORD

STANLEY E. CRAWFORD, M.D., Memphis, Tennessee. Associate Professor of Pediatrics, University of Tennessee. Medical Education: University of Texas, 1948. Diplomate, American Board of Pediatrics.



DR. HARPER

PAUL V. HARPER, M.D., Chicago, Illinois. Professor of Surgery, University of Chicago. Medical Education: Harvard University, 1941. Diplomate, American Board of Surgery.



DR. HOLGUIN

ALFONSO H. HOLGUIN, M.D., Atlanta, Georgia. Chief, Tuberculosis Branch, Communicable Disease Center, U. S. Public Health Service. Medical Education: University of Texas, 1957.



DR. JEFFERIES

WILLIAM MCK. JEFFERIES, M.D., Cleveland, Ohio. Assistant Professor of Medicine, Western Reserve University. Medical Education: University of Virginia, 1940. Diplomate, American Board of Internal Medicine.

ESSAYISTS



DR. LEADBETTER

GUY W. LEADBETTER, JR., M.D., Boston, Massachusetts. Clinical Associate Professor in Surgery, Harvard University. Medical Education: Johns Hopkins, 1953. Diplomate, American Board of Urology.



DR. LOCKIE

L. MAXWELL LOCKIE, M.D., Buffalo, New York. Medical Education: State University of New York, 1929. Diplomate, American Board of Internal Medicine.



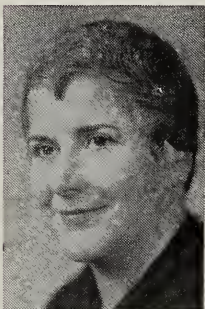
DR. MCKINNEY

J. WESLEY MCKINNEY, M.D., Memphis, Tennessee. Associate Professor of Ophthalmology, The University of Tennessee. Medical Education: University of Tennessee, 1930. Diplomate, American Board of Ophthalmology.

LOWELL S. MILLER, M.D., Houston, Texas. Associate Radiotherapist, M. D. Anderson Hospital and Tumor Institute, University of Texas. Medical Education: Duke University, 1945. Diplomate, American Board of Radiology.



DR. MILLER

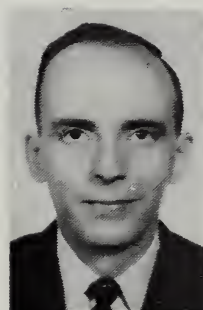


DR. RYDER

CLAIRE F. RYDER, M.D., Washington, D. C. Chief, Home Health Services, U. S. Public Health Service. Medical Education: Tufts University, 1943.



DAVID J. SENCER, M.D., Atlanta, Georgia. Chief, Communicable Disease Center, U. S. Public Health Service. Medical Education: University of Michigan, 1951. Diplomate, American Board of Preventive Medicine.



DR. SENCER



DR. TAPLIN

GEORGE V. TAPLIN, M.D., Los Angeles, California. Professor of Radiology, University of California. Medical Education: University of Rochester, 1936.

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## GOLF TOURNAMENT

The annual association golf tournament will be conducted at the new Jackson Country Club, Wednesday, May 11. Dr. Claude G. Callender of Jackson is chairman. The \$10 entrance fee includes one green fee and the tournament fellowship hour, 5 to 6 p.m. Advance registration is provided for, and entrants may also play on Tuesday, but the entrance fee covers green fees for one day only.

## FIFTY YEAR CLUB

Members of the Fifty Year Club will be honored at a luncheon on Tuesday, May 10, in Parlor B, the Heidelberg, at 12 o'clock noon. Dr. John B. Howell, Jr., of Canton, chairman of the Board of Trustees will preside.

WOMAN'S AUXILIARY TO THE  
MISSISSIPPI STATE MEDICAL ASSOCIATION

43rd Annual Session  
Hotel Heidelberg  
May 9-11, 1966



MRS. GADDY

OFFICERS

MRS. J. HURD GADDY  
Long Beach  
President

MRS. J. GORDON DEES  
Jackson  
President-Elect



MRS. DEES

ANNUAL SESSION CHAIRMEN

MRS. JIM G. HENDRICK  
Jackson  
General Chairman  
MRS. LAWRENCE W. LONG  
Jackson  
Tea  
MRS. LOUIS A. FARBER  
Jackson  
Luncheon

MRS. CHARLES M. HEAD  
Jackson  
Registration  
MRS. WILLIAM E. LOTTERHOS  
Jackson  
Decorations  
MRS. WILLIAM L. CROUCH  
Jackson  
Publicity

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Monday, May 9, 1966

1:45 p.m. Finance Committee Meeting, Mrs. A. T. Tatum  
3:00-5:00 p.m. Registration, Mrs. Charles M. Head, Chairman  
Arcade, Hotel Heidelberg  
3:30 p.m. Preconvention Executive Board Meeting  
Parlor B, Hotel Heidelberg

Tuesday, May 10, 1966

8:00 a.m. Continental Breakfast for Auxiliary Members,  
Mrs. J. Hurd Gaddy  
Rose Room, Hotel Heidelberg  
8:00-3:00 p.m. Registration  
Arcade, Hotel Heidelberg



- 9:00 a.m. General Session, Mrs. J. Hurd Gaddy, Presiding  
Rose Room, Hotel Heidelberg
- Invocation  
Reverend Rex Loftin, Jackson
- Auxiliary Pledge
- Address of Welcome  
Mrs. John R. Bise, Jackson
- Response  
Mrs. W. S. Sekul, Biloxi
- Introductions  
Mrs. C. C. Long, First Vice-President Woman's Auxiliary to AMA
- Presentation of Convention Chairman  
Mrs. Jim G. Hendrick, Jackson
- Presentation of President-Elect  
Mrs. J. Gordon Dees, Jackson
- Greetings from Everett H. Crawford, M.D.  
President, MSMA
- Greetings from James T. Thompson, M.D.  
President-Elect, MSMA
- Greetings from C. D. Taylor, M.D.  
Auxiliary Advisory Chairman, MSMA
- Report of AMA Auxiliary Convention  
Mrs. T. J. Safley, Jackson
- Report of SMA Auxiliary Convention  
Mrs. J. P. Culpepper, Jr., Hattiesburg
- Roll Call
- State Chairmen Reports
- Unit Presidents' Reports
- Recommendations of the Board
- Other Business
- President's Report  
Mrs. J. Hurd Gaddy, Long Beach
- Credentials and Registration  
Mrs. Jim G. Hendrick, Jackson
- Report of the Nomination Committee  
Mrs. T. J. Safley, Jackson
- Election of Officers
- Appointment of Delegates to AMA Auxiliary
- Memorial Service  
Mrs. A. J. McIlwain, Jackson
- Courtesy Resolutions  
Mrs. Julian Wiener, Jackson
- Adjournment
- 3:00-5:00 p.m. Tea, Governor's Mansion  
Mrs. Lawrence W. Long, Chairman

## 98th ANNUAL SESSION

Wednesday, May 11, 1966

8:00 a.m. Past Presidents' Breakfast  
Mrs. T. J. Safley, Presiding  
Silver Room, Hotel Heidelberg

8:00-5:00 p.m. Registration  
Arcade, Hotel Heidelberg

12:00 noon Woman's Auxiliary Luncheon  
Mrs. Lewis A. Farber, Chairman  
Mrs. J. Hurd Gaddy, Presiding  
The Roof, Hotel Heidelberg  
Installation of Officers for 1966-67

2:30 p.m. Postconvention Executive Board Meeting and President's Workshop  
Mrs. J. Gordon Dees, Presiding  
The Roof, Hotel Heidelberg

6:30 p.m. MSMA Fellowship Hour  
Olympic Room, Hotel Heidelberg

7:30 p.m. Latin American Fiesta  
Victory Room, Hotel Heidelberg

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## OTHER MEETINGS

### MISSISSIPPI ASSOCIATION OF PATHOLOGISTS

Hotel Heidelberg  
May 8-9, 1966

JOEL G. BRUNSON, Jackson, *President*

KENNETH M. HEARD, Jackson, *Secretary*

Sunday, May 8

2:30 p.m. Business Meeting, Silver Room

6:30 p.m. Fellowship Hour and Banquet, Rose Room

Monday, May 9

9:00 a.m. Seminar on Lesions of the Bone, Rose Room  
W. Scott Gilmer, Jackson

12:00 noon Recess for lunch

2:00 p.m. Continuation of Seminar



COMMITTEE ON TRAUMA, AMERICAN COLLEGE  
OF SURGEONS

Hotel Heidelberg  
Monday, May 9, 1966

PAUL S. DERIAN, Jackson, *Chairman*

8:30 a.m. Silver Room

Introduction

Paul S. Derian

Internal Medicine and the Patient

Frederic S. Yerger

The Mississippi Highway Accident Survey

Fred McGuire

The Jackson Tornado Disaster

Clinton E. Wallace

10:10 a.m. Intermission

10:15 a.m. Comprehensive Emergency Care

Robert Kennedy

Athletic Equipment

Mr. Doby M. Bartling

New Trends in Prophylaxis Against Tetanus

Raymond S. Martin, Jr.

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AMERICAN COLLEGE OF SURGEONS

The Mississippi Chapter of the American College of Surgeons will meet for a luncheon on Monday, May 9, the Heidelberg Roof, at 12 o'clock noon. The annual meeting will follow at 1:30 p.m. Officers are Drs. J. T. Davis of Corinth, president, and Dawson B. Conerly, Jr., of Hattiesburg, secretary.

MISSISSIPPI SOCIETY OF ANESTHESIOLOGISTS

Members of the Mississippi Society of Anesthesiologists will meet at Jackson on Sunday, May 8, at Primos' Northgate Restaurant, 4330 North State Street, for dinner at 6:30 p.m. Dr. James O. Elam of Kansas City, Missouri, will be the guest essayist. Officers are Drs. Ralph E. Dunn of Jackson, president; Richmond F. Sharbrough of Vicksburg, president-elect; and Paul A. Roell of Jackson, secretary.

#### MISSISSIPPI ORTHOPAEDIC SOCIETY

A luncheon meeting of the Mississippi Orthopaedic Society will be conducted on Monday, May 9, at the Mississippi Baptist Hospital, beginning at 12 o'clock noon. During the meeting that follows, the program subject will be "Scoliosis," and the guest essayist is Dr. John Moe of Minneapolis, Minnesota. A dinner occasion at the River Hills Club is scheduled for Monday evening beginning at 7:00 p.m. Officers are Drs. William C. Warner of Jackson, president; Royce H. Franks of Tupelo, president-elect; and Daniel J. Enger of Pascagoula, secretary.

#### MISSISSIPPI OB-GYN SOCIETY

There will be a luncheon meeting of the Mississippi Ob-Gyn Society on Tuesday, May 10, in the Silver Room, the Heidelberg, at 11:30 a.m. Officers are Drs. Chester H. Lake, president; O. B. Wooley, president-elect; and William S. Cook, secretary, all of Jackson.

#### FLYING PHYSICIANS ASSOCIATION

Mississippi members of the Flying Physicians Association and nonmember physicians interested in private aviation will meet for luncheon on Tuesday, May 10, in Parlor A, the Heidelberg, at 12 o'clock noon. Officers are Drs. Albert L. Gore, chairman, and Curtis W. Caine, secretary, both of Jackson.

#### MISSISSIPPI SOCIETY OF INTERNAL MEDICINE

Members of the Mississippi Society of Internal Medicine will enjoy a luncheon meeting on Tuesday, May 10, the Heidelberg Roof, at 12:30 p.m. Officers are Drs. Eugene M. Murphey, III, of Tupelo, president; Clinton E. Wallace of Jackson, president-elect; and Joe S. Covington of Meridian, secretary.

#### MISSISSIPPI DIABETES ASSOCIATION

All interested physicians are invited to a special meeting of the Mississippi Diabetes Association on Tuesday, May 10, in Parlor A, the Heidelberg, at 4:00 p.m. Officers are Drs. Karleen C. Neill of Jackson, president; G. Spencer Barnes of Columbus, president-elect; and Alton B. Cobb of Jackson, secretary.

#### PAST PRESIDENTS

Past presidents of the Mississippi State Medical Association and Woman's Auxiliary, respectively, will enjoy breakfast meetings on Wednesday morning, May 11. MSMA past presidents will meet in Parlor A, the Heidelberg, at 7:30 a.m., and Auxiliary past presidents, in the Silver Room at 8:00 a.m.



#### MAGP LUNCHEON

The Mississippi Academy of General Practice will sponsor a luncheon on Wednesday, May 11, in the Rose Room, the Heidelberg, at 12 o'clock noon. Officers are Drs. Max L. Pharr, president; Thomas M. Davis, president-elect; Albert L. Gore, secretary; and Miss Louise Lacey, executive secretary, all of Jackson.

#### MISSISSIPPI UROLOGICAL ASSOCIATION

Members of the Mississippi Urological Association will meet for a 12 o'clock noon luncheon in Parlor A, the Heidelberg, on Wednesday, May 11. The program, beginning at 2:00 p.m., will include a urological seminar conducted by Dr. Guy W. Leadbetter, Jr., of Boston, Massachusetts, and a Pyelogram Hour. Officers are Drs. V. F. Carey of Greenville, president, and Joel L. Alvis of Jackson, secretary.

#### MISSISSIPPI PSYCHIATRIC SOCIETY

The Mississippi Psychiatric Society will meet in annual session at 1:30 p.m. on Wednesday, May 11, in Parlor B, the Heidelberg. The scientific program will begin at 2:30 p.m. to which all interested physicians are invited. Officers are Drs. Willard L. Waldron of Jackson, president; Isaac C. East of Whitfield, president-elect; and W. L. Jaquith of Whitfield, secretary.

#### SOUTHERN MEDICAL ASSOCIATION

An invitational breakfast meeting of Southern Medical Association officials and guests will be held on Thursday morning, May 12, the Heidelberg Roof, at 8:00 a.m. Dr. Howard A. Nelson of Greenwood, SMA councilor for Mississippi, is host.

#### SECTION ON EENT LUNCHEON

The Section on Eye, Ear, Nose, and Throat will sponsor its annual luncheon on Thursday, May 12, at 12 o'clock noon, in the Rose Room, the Heidelberg. A business meeting of the Mississippi EENT Association will follow the luncheon.

#### AMERICAN ACADEMY OF PEDIATRICS

Members of the Mississippi Chapter, American Academy of Pediatrics, will meet for a luncheon on Thursday, May 12, the Heidelberg Roof, at 12 o'clock noon. Officers are Drs. Howard H. Nichols, chairman; Wilfred Q. Cole, Jr., secretary; and J. Lee Owen, program chairman, all of Jackson.



# The President Speaking

‘This Is the Answer’

EVERETT CRAWFORD, M.D.

Tylertown, Mississippi

AMONG MEDICINE’S CRITICS is the sometimes frequent cry that medical services in the United States are inefficiently organized. It has been charged that privately oriented services operate at levels below optimum utilization, that they do not provide sufficiently for the consumers of medical care, and that they are so loosely knit as to be cumbersome and unwieldy.

In the light of the performance turned in by physicians, hospitals, and allied professional personnel during the recent mid-state tornado disaster, these charges crumble once and for all. In this tragedy which brought death, injury, and devastation to a five-county area, the need and challenge for prompt and effective medical care were met with alacrity. In fact, the response of the entire health care team left little to be desired. With singular dedication, all who shared in this responsibility met the demands of the disaster in such a manner as to earn the praise of the public and the press.

What is of equal importance is that there was not a single doctor, nurse, or other who would have expected to do one iota less. The tasks of the emergency demanded and got their best. It is in this forge of trial that the real test comes, and the separation of fact from fallacy is made quite clear.

As splendid as it was, this sort of response isn’t limited to Mississippi physicians faced with a terrible emergency: It is typical of all American physicians who stand willing and ready to give their best when it is needed. It is in times such as these that the critics who write accusing books, cite trumped-up statistics, and make far-fetched statements remain silent—but they get their answer just the same. ★★★





## Prevailing Fees: Compensatory Justice or an Economic Trap?

### I

PREVAILING FEES" is a new expression on the medical horizon, and it apparently means different things to different people. For many, it is a new declaration of compensatory justice for professional services rendered. For a few others, it is something less, an economic trap in which no physician should be caught. But for everybody, prevailing fees is an exciting, inquiring idea, suggesting that voluntary prepayment and health insurance have at last caught the vision of meeting more fully their obligations in financing the cost of medical care.

Although widely discussed, prevailing fee compensation isn't easily explained. At first blush, it means that whatever the doctor charges will be paid, and nothing could be farther from the truth. In reality, it means that if the doctor charges what he and his colleagues, together with the insurance and prepayment community agree is the prevailing fee, yes, he will be paid. Anything more, however, may be questioned in a myriad of ways.

The idea, now an adopted reality of many Blue Shield plans and health insurers, is far more than an idealistic notion of what a physician ought to receive for his professional services, and it merits a serious look by all physicians who recognize realistically that much of their professional compensation does and will come from those

whom the patient has appointed to be responsible for financing his medical care.

### II

As the Blue plans conceive prevailing fee compensation, each physician will file a list of his fees with his respective plan, stating in exact monetary amounts what he expects to receive for his professional services. The plan is supposed to average or equate these fees with all others so received and find a norm within which it can readily recognize what may be considered a prevailing fee for any given surgical or medical service.

Thus, when a doctor cares for a patient for a given number of days for a medical condition or when he performs a given surgical procedure, the plan is supposed to be in position to identify and quickly pay the going rate for the service.

Some medical societies raise the question that the doctor may be committing himself to an irrevocable fee position, because he has made a single declaration with no society or group to represent him in altering or amending his act. On the other hand, it is argued that the doctor is stating his personal case before the responsible source of medical care financing, making a point which cannot be readily ignored in reaching a forthright and proper settlement in return for professional services rendered.

All of these are strong points of economic contention which no practicing physician can or should ignore. It is obvious to all that responsible prepayment and health insurance sources are more or less permanent factors in the medical care financing equation and that they ought to be reckoned with in terms of honesty and reality.

### III

Any practicing physician must recognize two things about voluntary prepayment and health insurance. In the first place, it is all but impossible to prepay the cost of something which has not yet been purchased at a price which has also not yet been specified. Secondly, it is difficult to insure anything which cannot be predicted with some degree of actuarial perfection to the extent of providing for any eventuality which may occur. These, of course, are the burdens of the Blue plans and the voluntary health insurance industry.

Since there are obviously contradictions in popular terminology, there must also be guidelines in realistic terms for taking these risks. The prepayment and insurance people have such a basis comprised of seven principles:

- The risk must be subject to the laws of mathematical probability.

- There must be an insurable interest.

- There should be a large number of independent risks spread over a fairly large geographic area.

- The risk involved must be important to the insured party.

- There must be an element of uncertainty as to the occurrence of the event of the adversity covered.

- The existence of voluntary prepayment or insurance should not have a tendency to increase the risk or to provide an opportunity for the insured to make a financial gain, and

- The risk must be measurable financially.

### IV

Not only are the Blue plans experimenting with prevailing fees, but the big commercial giants are moving in also. One of the five largest companies in the industry has a program to pay the going rate—in terms of contract definition—for a major industrial group. In the greater sense, this may be considered a move forward, but in another, it may likewise be thought of as a stunt in money handling.

The key to the private insurers' programs is the local review committee. This puts the burden of saying what is reasonable and just upon the component medical society. Now, this may not be as unreasonable as it may first seem, because local societies have offered the services of grievance committees which do just this for many years. What is new is that the service is offered in behalf of a commercial company.

The matter of prevailing fee compensation may be an issue for debate through the next decade as medical care financing advances. The issue may become more crucial as big government moves in closer on the scene. Thus, it all points to the necessity for the practicing physician to analyze thoughtfully and carefully what constitutes compensatory justice or an economic trap.—R.B.K.

## Tomorrow's Hospital: The Automated Servant

The hospital of tomorrow, which will generally look, sound, and smell the same as the hospital of today, is here. The main difference, it seems, is in push buttons, microphones, TV monitors, sophisticated radiation devices, and computers. All in all, the patients will fare better and over the long haul, probably pay less for the care they get.

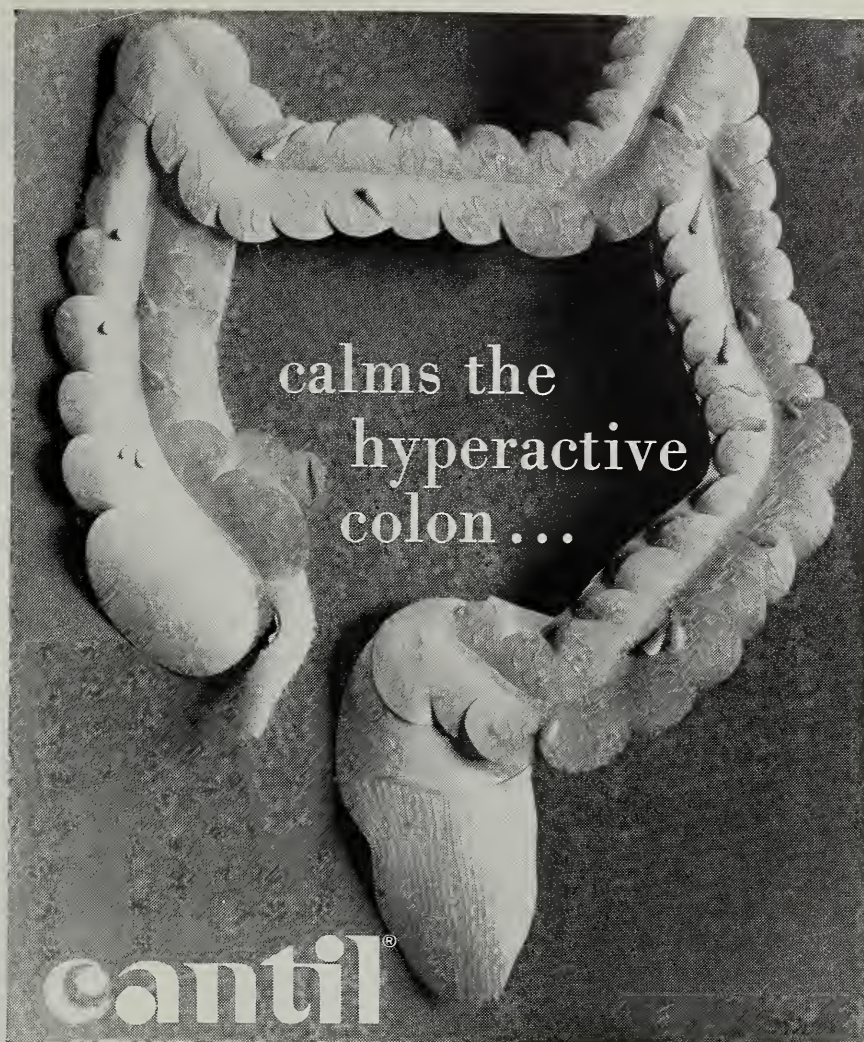
Take, for example, the Albert Einstein Hospital of the Yeshiva University College of Medicine. When you walk in, it looks as if it were a new hospital in your hometown. But look behind the scenes, and the automation of tomorrow becomes apparent. Beside each bed is a gadget about the size and shape of an electric razor. With it, the patient can talk to the nurse, adjust his bed, raise and lower the window blind, and turn the TV on and off.

There is no "calling Dr. Jones" in the corridors: It's all done by pocket radio, and what's more, each staffer can talk to pathology, the blood bank, central supply, surgery, and intensive care by the same little magic box.

When a physician needs to consult a chart, he simply pushes a series of buttons on a remote console of an IBM 360 computer, and he instantly receives a printout of the patient's temperature, condition, medication orders, and nursing reports. Even drugs prescribed are charged in the business office with microsecond speed and accuracy.

Yeshiva also boasts the ultimate in radiation equipment. Its new isotope scanner looks over the entire body in an instant, thereby saving both the





(mepenzolate bromide)

## *helps restore normal motility and tone*

**Cantil** (mepenzolate bromide) works in the colon. In irritable colon, spastic colon, ulcerative colitis and other functional and organic colonic disorders, it acts to:

- control diarrhea/constipation
- relieve spasm, cramping, bloating
- make patients more comfortable

with little effect on stomach, bladder or other viscera.

"In 40 of 44 cases of irritable or spastic colon, Cantil [mepenzolate bromide] or Cantil with Phenobarbital reduced or abolished abdominal pain, diarrhea and distention and promoted restoration of normal bowel function . . . Cantil [mepenzolate bromide] proved to be singularly free of anticholinergic side-effects. Blurring of vision or dryness of the mouth were occasionally seen and were usually managed with a reduction in dosage. Urinary retention, noted in two cases was eliminated in one by reducing dosage."<sup>1</sup>

### **IN BRIEF:**

One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

Supplied: CANTIL (mepenzolate bromide)—25 mg. per scored tablet. Bottles of 100 and 250.

CANTIL with PHENOBARBITAL—containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

1-Riese, J.A.: Amer. J. Gastroent. 28:541 (Nov.) 1957



**LAKE SIDE LABORATORIES, INC.**  
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patient and radiologist time and effort—to say nothing of discomfort on the part of the patient. Its new linear accelerator can deliver deep radiation treatment to deeply seated lesions and may be the only one of its kind in present service.

The hospital's multi-12 autoanalyzer can do more bloods in an hour than a skilled technician can do in six months.

All of this adds up to the fact that the hospital of tomorrow can and will save money for patients. The terrible villain in the cost of medical care hasn't been the physician or the drug supplier—in fact, they get less of the medical care dollar than they did just five years ago—but rather the hospital whose cost has risen more than 400 per cent in 20 years. And, more importantly, it means better medical care for those whose needs require its purchase. Doesn't this all add up to progress? —R.B.K.

## Physical Therapy: Now in Its Rightful Role

House Bill 272 licensing physical therapy has been enacted by the 1966 Regular Session of the Mississippi Legislature, and it represents a victory for the physical therapists. Additionally, the enactment represents a victory for the state medical association's policy of helping the physical therapists achieve licensure.

Among all worthy allied professional groups, none deserves recognition and sanction more than the physical therapists. Admittedly small in numbers, they are a significant force in the total health care team, and the state medical association has long sought to assist their quest for the lawful stature which they deserve.

The physical therapists in Mississippi subscribe rigorously to the tenets of the American Physical Therapy Association. They will not see a patient until a physician has prescribed their services. They adhere to a strict code of ethics, and they are more than sensitive to those who wrongly represent themselves to be physical therapists when, in fact, they are not.

After too many years, this member group of the health care team now takes its rightful place among those properly sanctioned by the medical profession and the state as lawfully and ethically contributing to the needs of all citizens.—R.B.K.

MARIETTA ALPER has been appointed director of the Forrest County Health Department at Hattiesburg. She received her M.D. degree from the Tulane University School of Medicine and postgraduate training at New Orleans and Birmingham. For four years, she has worked as a private physician with the Keesler Air Force Base at Biloxi.

JAMES D. HADLEY of Bay Springs has been selected Jaycee Young Man of the Year by his local Junior Chamber of Commerce. He has been active in both junior and senior chamber affairs and in civic leadership roles.

STANLEY A. HILL of Corinth has been elected chief of staff of the new Magnolia Hospital.



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"You got those glasses here?"



# DACTILASE®

Each tablet contains:

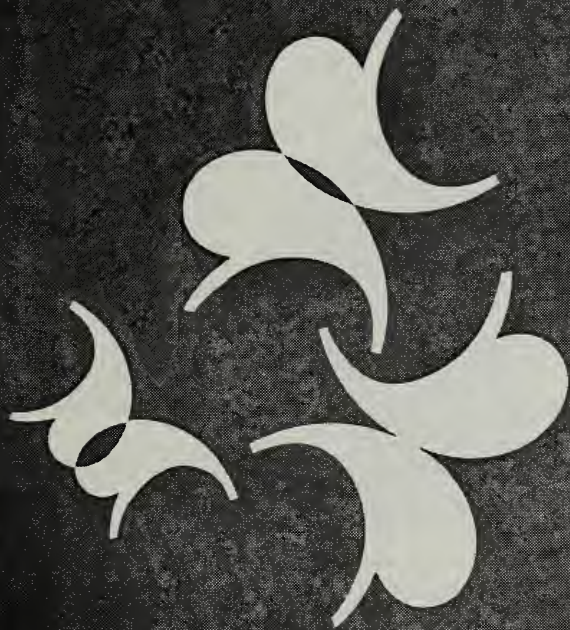
Dactil® (piperidolate hydrochloride), 50 mg.;  
Standardized cellulolytic\* enzyme, 2 mg.;  
Standardized amylolytic enzyme, 15 mg.;  
Standardized proteolytic enzyme, 10 mg.;  
Pancreatin 3X\*\* (source of lipolytic activity),  
100 mg.; Taurocholic acid, 15 mg.

\*Need in human nutrition not established.

\*\*As acid resistant granules equivalent in activity to 300 mg. Pancreatin N.F.

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STOMACHS  
ARE ALL  
BUTTERFLIES

AND  
GAS



In chronic or acute indigestion, fluttery, gassy stomachs obtain prompt, gratifying relief through the antispasmodic, surface anesthetic and enzymatic activity of Dactilase. Dactilase decreases hypermotility and pain and reduces the production of gas. Dactilase does not induce stasis, but helps restore normal tone. It has little or no effect on enzyme secretions, but *adds* enzymes, thus contributing to the digestive efficiency of the patient.

#### Side Effects and Contraindications:

Dactilase is almost entirely free of side effects. However, it should be withheld in glaucoma and in jaundice due to complete biliary obstruction.

**Administration and Dosage:** One tablet with, or immediately following, each meal. Tablets should be swallowed whole.

**Supplied:** Bottles of 60 and 250.

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FOR PATIENTS  
YOU SEE  
EVERY DAY

## PERSONALS / Continued

DOUGLAS B. HAYNES, JR., of Clarksdale was named as one of the three outstanding young men of the year by the Mississippi Junior Chamber of Commerce. The state-level awardees are from among those named by their respective local Jaycee organizations.

W. N. JENKINS of Port Gibson was honored in ceremonies observing the founding of the local Lions Club. He is one of the charter members whose service began with the unit founding in 1928 and is a former district governor of Lions.

A. M. MCBRYDE of Sumrall has been elected to the board of directors of the Mississippi Economic Council. He will soon enter service on the three-year term as Area 18 director. This area includes the counties of Forrest, Lamar, Marion, and Walhalla.

C. W. NORWOOD, SR., of Corinth has been elected vice president of the Mid-South Postgraduate Medical Assembly during the recent annual meeting at Memphis.

WILLIAM E. RIECKEN, JR., of Kosciusko was named outstanding layman of the year by the First Methodist Church of his home city. He is director of the Attala County Health Department of Kosciusko.

SAMUEL J. SIMMONS, III, of Pascagoula is serving as chairman of the Jackson County Heart Fund for 1966. Mrs. Simmons has been named co-chairman in charge of special gifts. Goal of the local drive was \$8,000.



The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

BRITTON, ALBERT BAZAAR, JR., Jackson. Born Enterprise, Miss., Jan. 17, 1922; M.D., Howard University College of Medicine, Washington, D. C., 1947; interned Freedmen's Hospital, Washington, D. C., one year; ob-gyn residency, Flint Goodridge Hospital, New Orleans, La.; elected Jan. 4, 1966, by Central Medical Society.

HOLLINGSHEAD, CHARLES AARON, Picayune. Born Laurel, Miss., Aug. 4, 1935; M.D., University of Mississippi School of Medicine, Jackson, 1964; interned Mobile General Hospital, Ala., one year; elected Sept. 13, 1965, by Pearl River County Medical Society.

MAYFIELD, JAMES ROBERT, Carthage. Born Lumberton, N. C., Sept. 14, 1937; M.D., University of Mississippi School of Medicine, Jackson, 1962; interned Wilford Hall Air Force Hospital, San Antonio, Tex., one year; captain, U. S. Air Force; elected Jan. 4, 1966, by Central Medical Society.

SAMSON, ROLAND FRANCIS, Jackson. Born New Orleans, La., Jan. 20, 1934; M.D., Louisiana State University School of Medicine, New Orleans, 1958; interned Milwaukee County General Hospital, Wisc., one year; residency, Charity Hospital of Louisiana, New Orleans, four years; member, College of American Pathologists, the American Society of Clinical Pathologists, and the Society of Nuclear Medicine; certified by the American Board of Pathology; elected Jan. 4, 1966, by Central Medical Society.

STURGIS, GEORGE MADISON, Jackson. Born Baton Rouge, La., April 15, 1932; M.D., Louisiana State University School of Medicine, New Orleans, 1958; interned Charity Hospital of Louisiana, New Orleans, one year; pathology residency, Charity Hospital of Louisiana, New Orleans, four years; member, College of American Pathologists and the American Society of Clinical Pathologists; certified by the American Board of Pathology; elected Jan. 4, 1966, by Central Medical Society.

## Dr. Marston Named Commencement Speaker

The University of Mississippi School of Medicine has announced that Dr. Robert Q. Marston of Bethesda, Md., will be the 1966 commencement speaker. Until Feb. 1, Dr. Marston was dean of the school, director of the medical center, and vice chancellor of the university.

The former Mississippi medical leader-educator was appointed to head the new heart disease, cancer, and stroke program under the National Institutes of Health with the rank of associate director of NIH.

UMC commencement exercises are set for May 29 at Jackson.



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aminoacetic acid (glycine) 750 mg.

**Administration and Dosage:** One or two chewable tablets 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation. The recommended dosage should not be exceeded.

**Side effects:** Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is a concomitant administration of a coronary vasodilator.

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### Book Reviews

**Experience in Renal Transplantation.** By Thomas E. Starzl, Ph.D., M.D., Professor of Surgery, University of Colorado School of Medicine; Chief, Surgical Service, Veterans Administration Hospital, Denver, Colorado. 376 pages with illustrations. Philadelphia: W. B. Saunders Company, 1964. \$17.00.

The transfer of functioning organs from one human being to another is an established fact. This book objectively expostulates the difficulties, medical, moral, and social, in over 75 renal homotransplants. The author describes the preparation of the patient for the transplantation procedure which includes multiple dialyses and preliminary nephrectomy. Donors are picked according to certain blood type compatibilities that have been learned by wide experience. The use of cadaver kidneys is discouraged in our present state of the knowledge of prevention of ischemic changes to such organs. The actual techniques and pitfalls of donor as well as recipient surgery are discussed.

The complications in these operations are many and varied and fall into two categories: those due to the complications of routine surgery; and those due to operations performed upon a patient whose immunological responsiveness is impaired by uremia and rendered further unresponsive by pre-operative immunosuppressive agents, namely, great susceptibility to infection.

The dosage and mode of administration of antirejection therapy is fully discussed. There is at present no good laboratory measure of the rejection phenomenon except on clinical grounds of fever, leucocytosis, and diminishing urine output. All of these findings occur after some damage has been afforded the transplanted organ.

The late results are good in the author's series, but the failures are discussed frankly. Many of the failures have been due to infections.

It is stated that as yet the immunological prob-

lem remains unsolved as well as the moral issues. The first will have to be solved by the medical profession, the latter by the public at large. Certain guidelines for the ethical responsibilities of physicians are laid down. Basically transplantation is still an experimental procedure raising more apparently insolvable socio-economic problems than any advance in the history of medicine.

WILLIAM A. NEELY, M.D.

**Handbook of Physical Medicine and Rehabilitation.** Edited by Frank H. Krusen, M.D.; Associate Editors, Frederic J. Kottke, M.D., and Paul M. Ellwood, Jr., M.D. Published under the auspices of the American Rehabilitation Foundation. 725 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. \$20.00.

This book is a result of several years' work by The American Rehabilitation Foundation Medical Committee and represents an encyclopedic compilation of papers covering the broad field of physical medicine and rehabilitation by a group of distinguished experts in this and its related paramedical fields. The material is organized into three major parts: Evaluation of the Patient, Techniques of Management and Evaluation and Management of Specific Disorders. There is an introductory chapter covering The Scope of Physical Medicine and Rehabilitation. A bibliography follows each chapter.

The editor, Dr. Frank H. Krusen, in the introductory chapter on The Scope of Physical Medicine and Rehabilitation stresses the theme that physicians must recognize their obligation to the whole patient and become increasingly concerned with full use of all community resources and paramedical specialists, such as social workers, psychologists and vocational counselors, if they are to deal effectively with the patient and his total care and rehabilitation. This applies especially to the chronically-ill and aged. The urgent need for increased facilities and personnel skilled in the physical, psychological, social and vocational



ONE PINT  
OF BLOOD  
PROVIDES  
NO MORE  
IRON

THAN ONE 5 CC.  
AMPUL OF



Obstetrical or post—surgical patients requiring a dependable increase in hemoglobin will receive as much iron (250 mg. in a 5 cc. ampul) as in one pint of blood. Imferon (iron dextran injection) is less expensive and it avoids the well-recognized hazards of whole blood transfusion. When patients cannot—or cannot be relied upon to—take oral iron, Imferon (iron dextran injection) will rapidly supply needed iron for reserve stores.

## IMFERON® (iron dextran injection)

**IN BRIEF: ACTION AND USES:** A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

**COMPOSITION:** Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

**ADMINISTRATION AND DOSAGE:** Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

**SIDE EFFECTS:** Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

**PRECAUTIONS:** If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

**CONTRAINDICATIONS:** Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only it is contraindicated in other anemias.

**CARCINOGENICITY POTENTIAL:** Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

**SUPPLIED:** 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

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## BOOKS / Continued

phases of rehabilitation is well documented.

The first section on Patient Evaluation presents an approach to evaluation of persons with physical handicaps, speech and language disorders involving all members of the rehabilitation team. A chapter on basic principles of electrodiagnosis is also included.

The Techniques of Management section outlines the basic modalities of physical medicine, including heat, diathermy, hydrotherapy, ultraviolet therapy, electrical stimulation, massage and exercise. The important principles of patient transfers, selection and use of wheelchairs, bed positioning for prevention of disability and decubiti are given effective presentation in separate chapters.

The multidisciplinary attack to achieve functional independence and permit maximum personal independence is stressed. This is timely in that the important recent emphasis on vocational rehabilitation may have resulted in our overlooking rehabilitation goals for many persons today. Training in self-feeding, toilet use and homemaking, for example, could mean the difference between continued dependence and frustration versus the psychological and social gains from independence in these basic human needs.

The chapter on prescribing physical and occupational therapy is perhaps too technical for the general physician. He could in most instances be helped considerably by the health team member who is expected to deliver the service—physical therapist, occupational therapist, etc.

The final section on Evaluation and Management of Specific Disorders presents chapters on the application of physical medicine and rehabilitation techniques to a number of the more common sensory, neuro-muscular and orthopedic disorders.

There are final chapters on respiratory function and cardiovascular disease management.

This book should make an excellent reference for physicians in general practice or the clinical specialties with overlap in physical medicine and rehabilitation. The use of this handbook should aid the physician and his paramedical associates in better communication and teamwork for more comprehensive patient care and rehabilitation.

ALTON B. COBB, M.D.

Current Surgical Management III. A Book of Alternative Viewpoints on Controversial Surgical Problems. By Edwin H. Ellison, M.D., Stanley R. Friesen, M.D., and John H. Mulholland, M.D. With contributions by 104 authorities. 519 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. \$11.50.

Controversy, whether in medicine or politics remains a most stimulating factor. This factor has made Volume I and Volume II popular books with both residents and practicing surgeons. These well-known editors have again chosen controversial subjects for their appeal to the practicing surgeon. Also chosen are 104 distinguished authorities to discuss these subjects.

The subject and comment on the controversy is discussed in the introduction to each chapter by one of the editors. Each contributing editor writes with convincing authority drawn from laboratory data, surgical literature review, and his own personal experience.

In some chapters, the controversy is based purely on surgical technique (Cholecystectomy and Acute Cholecystitis), while some chapters (Villous Adenomas) may relate more to pathological interpretations. The discussion on acute hemorrhage from duodenal ulcer constitutes an excellent review of currently accepted methods.

It is not the intention of the editors to confuse, but rather to stimulate the reader's thinking. This book can be recommended enthusiastically to practicing surgeons.

ROBERT S. CALDWELL, M.D.



## DEATHS

CRABB, JAMES VESTER, Booneville. M.D., University of Tennessee College of Medicine, Memphis, 1914; died July 3, 1965, aged 84.

MCNEAL, JAMES SAMUEL, Columbus. M.D., Memphis Hospital Medical College, Tenn., 1909; died March 20, 1965, aged 85.

ST. HILLE, HENRI JOSEPH, Greenville. M.D., Middlesex University School of Medicine, Waltham, Mass., 1941; interned Parkside Hospital, Detroit, Michigan; died Oct. 5, 1965, aged 65.



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LIVES  
SAVES  
MONEY  
WASTES  
WATER**



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oral diuretic

**Dosage:** One 2 or 4 mg. tablet once or twice daily.

**Precautions:** As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

**Side Effects:** Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have occasionally been noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by the administration of thiazides.

**Contraindications:** Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

**How Supplied:** Bottles of 100 and 1000 tablets.

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# Mid-State Physicians, Allied Personnel Man Hospitals in Tornado Disaster

Jackson physicians and hospitals responded within minutes to care for nearly 500 tornado victims when the March 3 twisters struck in the southwestern portion of the city as they cut a swath of destruction eastward toward the Alabama line through five mid-state counties.

At press time, the Mississippi Highway Patrol counted the dead at 53 with 19 still on the critical lists in Jackson hospitals. Damage was estimated initially at \$12 million, and just under 500 were treated for injury, most of whom were released.

At Mississippi Baptist Hospital, a spokesman said that medical staff members and nurses reported in such numbers as to meet all emergency care needs. Calls from doctors in the mid-state area poured in volunteering assistance.

One hospital official said that nurses who had not practiced for 10 years reported voluntarily in uniform.

At the new 228 bed Hinds General Hospital, the administrator reported that enough volunteer medical personnel responded to man the then-unopened fourth floor of the general medical and surgical institution.

Representatives of pharmaceutical manufacturing companies offered to secure needed drugs on an emergency basis.

Local radio and television stations worked with medical disaster control headed by Dr. C. E. Wallace of Jackson and had calls for medical personnel on the air within minutes after the main strike in the Candlestick Park area.

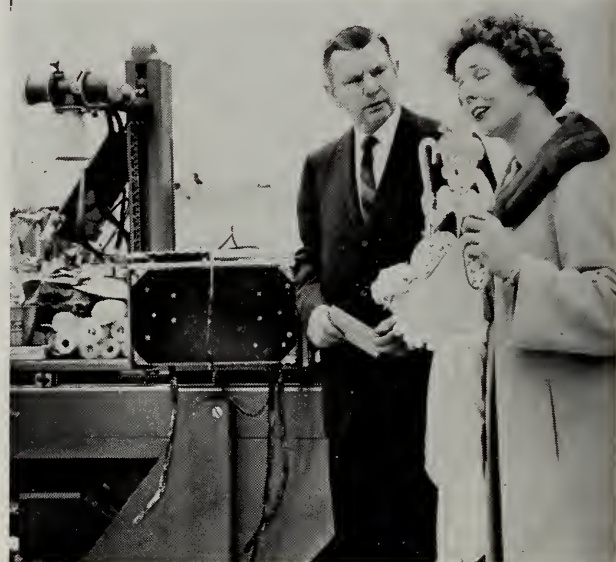
The private office and clinic facilities of Dr. Hilton M. Fairchild, located in the shopping center which took the main impact of the destruction, were completely demolished.

Speaking editorially of the response of the medical profession, the *Clarion-Ledger*, the state's largest newspaper, said that "the unbelievable flexibility displayed by our hospitals, physicians,

staffs, and volunteers should be written in shining letters on our honor roll which includes also ministers of all faiths, medical aides of varied abilities, members of both races."

The University Hospital reported a substantial influx of storm victims, but a lesser volume came into the St. Dominic-Jackson Memorial Hospital, northernmost of the city's medical institutions.

One newspaper report of the emergency medical service said that "never was there any time



*Lt. Gov. Carroll Gartin and Mrs. Wilma Arender stand amid total ruins of Dr. Hilton M. Fairchild's clinic in hard-hit Candlestick Park, Jackson. Freak twister demolished building but left x-ray machine standing intact. Mrs. Arender, clinic nurse, sustained injuries when trapped under a crumpled wall. Symbolically, she is holding a Little Bo Peep figure from pediatrics examination room. Gartin was one of first on disaster scene, directing aid and rescue operations. (Photo by Kim Sutherland)*



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AND  
KEEP IT DOWN**

190  
102

Metatensin lowers blood pressure and keeps it low—effectively and economically. It combines reserpine with trichlormethiazide which affords more potent saluresis with less loss of potassium than from earlier thiazides. Reserpine contributes antihypertensive effect by relieving anxiety and tension. Metatensin is well-tolerated over long periods; with its effectiveness and economy it assures antihypertensive therapy you and your patients can stay with.

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Each scored tablet contains:  
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2 mg. or 4 mg. and  
Reserpine 0.1 mg.

**Usual adult dose:** One tablet twice daily. **Precautions and side effects:** Patients with hepatic cirrhosis or diarrheal syndromes, or under therapy with digitalis, ACTH, or potassium-losing steroids, should be observed for signs of hypokalemia. With thiazides, electrolyte depletion, diabetes, gout, granulopenia, nausea, pancreatitis, cholestatic jaundice, flushing, mild muscle cramps, constipation, photosensitivity, acute myopia, perimacular edema, paresthesias, neonatal bone marrow depression in infants of mothers who received thiazides during pregnancy, skin rash or purpura with or without thrombocytopenia, may occur. With reserpine, untoward effects may include depression, peptic ulcer and bronchial asthma. Withdraw medication at least 7 days prior to electroshock therapy, 2 weeks prior to elective surgery.

**Contraindications:** Complete renal shutdown, rising azotemia or development of hyperkalemia or acidosis in severe renal disease.

**Supplied:** Metatensin tablets, 2 mg., 4 mg.—bottles of 100 and 1000.

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when a victim had to wait for care." It characterized initiation of the disaster care plan as being put into effect with "crisp dispatch."

Heavy damage resulted from a strike in the Rankin County industrial community of Flowood with a number of factories and plants sustaining severe losses, with two almost totally destroyed.

The disaster recalled the Vicksburg tornado in December of 1953 when a similar response from the medical profession resulted in saving countless lives. For more than 15 years, the state medical association, local medical societies, and hospitals have emphasized the need for disaster care plans which can be made operational without delay.

## UMC to Train in Retardation Management

In-depth training in the many aspects of diagnosis, treatment, and total management of the mentally retarded child will augment the pediatric program at the University Medical Center under a near half million dollar training grant to Dr. Margaret B. Batson, associate professor of pediatrics and assistant professor of psychiatry.

Effective Oct. 1, 1965, to June 30, 1970, the Children's Bureau awarded funds for an infant and child development clinic located in the renovated former heart station.

Teaching value, rather than need, will be the criterion for selection of the limited number of patients who can be accepted.

Under the terms of the award, no more than 150 new patients must be seen yearly, each to be kept until the maximum has been accomplished. Plans are to return patients to their home communities for management with follow-up visits to the clinic as indicated.

Physicians and appropriate agencies from the entire state except the 11-county area served by the Tupelo Center may apply for acceptance of infants and children up to age 14. In the Tupelo area, only that center may refer patients to avoid duplication of services.

Grant funds will defray costs of care, including essential, short term hospitalization as a service patient. The award stipulates, however, that health insurance benefits must be applied toward all costs covered under the policy.

## Dr. Hicks Is New Mid-South President

Dr. G. Swink Hicks of Natchez was inaugurated president of the Mid-South Postgraduate Medical Assembly at Memphis during the recent annual meeting. The scientific organization in-

cludes physician-members from Arkansas, Mississippi, and Tennessee.

The three-day session headquartered at the Peabody Hotel where scientific presentations were heard and both technical and scientific exhibits were located. Business sessions and installation of officers were also on the program.



*Dr. Hicks*

Dr. Hicks is past president of the Mississippi State Medical Association, having served during the 1960-61 year. He is currently a member of the Board of Trustees, and has served on a number of association committees.

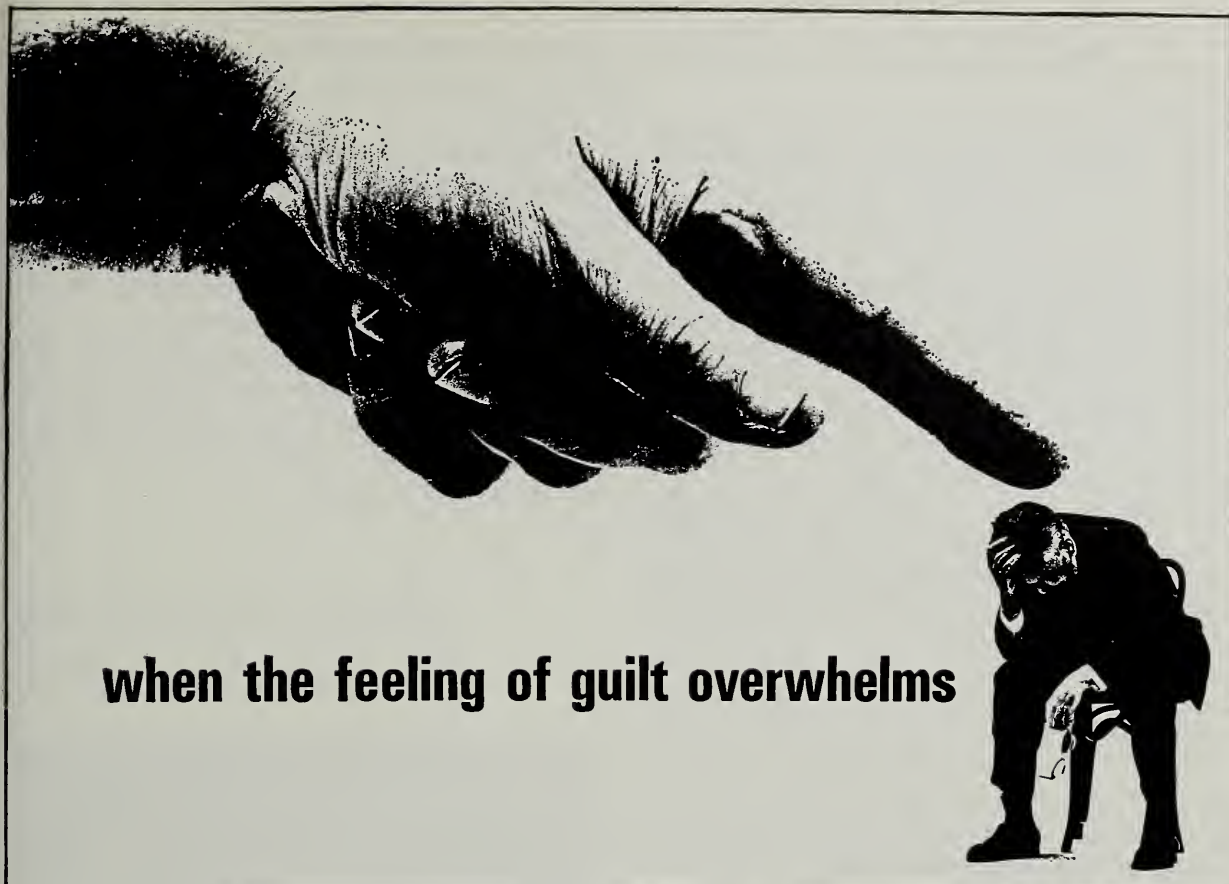
## Prairie Society Holds First Regular Meet

The first regular meeting of the Prairie Medical Society following its Jan. 1 chartering was conducted at Macon on March 8. Dr. G. Spencer Barnes of Columbus, society president, presented the scientific program.

Dr. James D. Hardy of Jackson, professor and chairman, Department of Surgery, University Medical Center, spoke on "Jaundice From the Surgical Point of View." Dr. Alvin J. Cummins of Memphis, professor of medicine and chief of Gastroenterology Service, University of Tennessee School of Medicine, chose as his topic "Jaundice From the Medical Point of View."

The society is the newest among the association's 17 component units. Its professional and organizational jurisdiction covers the counties of Clay, Lowndes, Noxubee, and Oktibbeha.





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**NORPRAMIN<sup>®</sup>**  
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 non-sedating • rapid-acting  
**ANTIDEPRESSANT**

**overcomes guilt, lifts depression, restores confidence**

Feelings of guilt, worthlessness, emptiness and loss frequently characterize depression. Such feelings, along with insomnia, physical complaints, sadness, apprehension, and other symptoms of depression rapidly respond to Norpramin (desipramine hydrochloride). Improvement often begins in 2-5 days, sometimes in less. A few patients, sensitive to central nervous system stimulants may become restless as depression is lifted—in such cases dosage may be reduced or a tranquilizer added.

**Indications:** In depression of any kind—neurotic and psychotic depressive reactions; manic-depressive or involutional psychotic reactions. **Dosage:** Optimal results are obtained at a dosage of two 25 mg. tablets t.i.d. (150 mg./day). **Contraindications and Precautions:** Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established. **Adverse Effects:** Side effects, usually mild may include: dry mouth, constipation, dizziness, palpitation, delayed urination, "bad taste," sensory illusion, tinnitus, agitation and stimulation, sweating, drowsiness, headache, orthostatic hypotension, flushing, nausea, cramps, weakness, blurred vision and mydriasis, rash, allergy, transient eosinophilia, granulopenia, altered liver function, ataxia and extrapyramidal signs. **Supplied:** Norpramin (desipramine hydrochloride) tablets of 25 mg., in bottles of 50, 500 and 1000.

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## Mrs. Reeves Assumes Duties at EMCU

Doris Reeves, R.N., of Jackson has been appointed staff nurse at the state medical association's Emergency Medical Care Unit in the capitol building while Ila G. McCleave, R.N., recovers from a recent illness. Mrs. Reeves assumed her duties on March 7, working with the Doctor of the Day in serving the legislature.

Mrs. McCleave was hospitalized at Jackson and may be absent from her post in the EMCU for a month, her attending physician said. A concurrent resolution introduced by the Speaker of the House of Representatives, Hon. Walter Sillers of Rosedale, wished her a speedy recovery and commended her service. She has served as staff nurse in the care unit since it was first opened in 1964. The Emergency Medical Care Unit is open each legislative day with a different physician serving as Doctor of the Day. The unit is located in Room 401-B of the New Capitol Building.

## UMC Junior Wins SKF-AAMC Fellowship

John B. McMullan, Jr., a junior in the University of Mississippi School of Medicine, has been awarded a \$1,499 fellowship which will permit him to assist for ten weeks this summer at a mission hospital in Thailand.

McMullan, whose parents live at 4451 Winnie Way, Mobile, Alabama, is one of 35 American medical students selected to receive Smith Kline & French Laboratories Foreign Fellowships from the Association of American Medical Colleges. The fellowships are supported by a grant from the Philadelphia prescription drug firm.

McMullan will leave in June for Manorom Christian Hospital, situated in the village of Manorom in central Thailand. There he will work with Dr. F. Christopher Maddox, medical superintendent. The hospital is a mission station of the Overseas Missionary Fellowship.

Manorom Christian Hospital has 85 beds, 65 for general patients and 20 reserved for leprosy patients. In addition, about 1,000 new patients are seen monthly in the outpatient clinic. Accom-

panied by staff physicians, McMullan will help care for inpatients and outpatients and will assist in surgery.

A top student in his medical school class, McMullan is a graduate of the University of Mississippi. He is the second student from the university's medical school to receive a Smith Kline & French Foreign Fellowship. McMullan lives at 1619 Piedmont, Jackson, Mississippi.

Now entering its seventh year, the Smith Kline & French Foreign Fellowships program was established to permit American medical students to widen their medical horizons in cultures very different from their own.

## Robins Gives Drugs To MSMA's EMCU



*Dr. John B. Howell, Jr., of Canton checks supplies of drugs with A. H. Robins professional service representative Robert L. North of Brandon. Scene is the state association's Emergency Medical Care Unit for the legislature in the capitol at Jackson where Dr. Howell, chairman of the Board of Trustees, was taking his turn as "Doctor of the Day." North presented a supply of drugs on behalf of the Richmond, Va., pharmaceutical manufacturer as a public service.*



Effectively combat bacterial infection and maintain relief of respiratory symptoms

# Tetrex<sup>®</sup>-APC

with Bristamin<sup>®</sup>  
(tetracycline phosphate complex  
with analgesics and  
antihistamine)

The advantages of Tetrex<sup>®</sup> (tetracycline phosphate complex). It contains the basic tetracycline which is less bound to serum protein than is demethylchlortetracycline<sup>1</sup>. (It puts a higher percentage of active antibiotic into the blood.) Its basic tetracycline is also better tolerated than oxy- or demethylchlortetracycline.<sup>2,3</sup> Unlike demethylchlortetracycline,<sup>4</sup> no cases of photodynamic skin reaction have been reported with Tetrex (tetracycline phosphate complex).

with the benefits of APC and Bristamin (phenyltoloxamine citrate). Traditional APC provides predictable relief of pain, fever and malaise in acute respiratory infections, while the phenyltoloxamine citrate—notable for its effective histamine-blocking action with minimal drowsiness—adds relief of watering eyes, rhinorrhea, congestion and “tight” chest symptoms.

*References:* 1. Roberts, C.E., Jr.; Perry, D.M.; Kuharic, H.A., and Kirby, W.M.M.: Arch. Int. Med. 107:204 (Feb.) 1961. 2. Dowling, H.F.; Lepper, M.H., and Jackson, G.G.: Clin. Pharmacol. & Therap. 3:564 (Sept.-Oct.) 1962. 3. Editorial: Antibiotics & Chemother. 11:427 (July) 1961. 4. Baer, R.L., and Harber, L.C.: JAMA 192:989 (June 14) 1965.

**BRISTOL THERAPEUTIC SUMMARY.** For complete information, consult Official Package Circular. *Indications:* Upper respiratory infections due to sensitive bacteria where concomitant symptomatic relief of fever, malaise and congestion is desired. *Contraindication:* A past history of hypersensitivity to one or more components. *Warnings:* Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if discomfort occurs. No cases of photosensitivity have been reported with Tetrex (tetracycline phosphate complex). With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood). *Precautions:* Antihistamines may cause drowsiness and patients should not perform tasks requiring mental alertness while taking this agent. Bacterial or mycotic superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanelles. In gonorrheal therapy, serologic tests for syphilis should be performed initially and monthly for three months. *Adverse Reactions:* Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis and allergic reactions may occur. *Usual Adult Dose:* Two capsules q.i.d. Continue therapy for at least 10 days in beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

**BRISTOL**

BRISTOL LABORATORIES/Division of Bristol-Myers Co., Syracuse, New York

## Dr. Jaquith Receives 1966 'Missy' Award



*Dr. W. L. Jaquith of Whitfield, right, receives the University of Mississippi-First Federal Foundation Award for 1966 from Chancellor J. D. Williams of Ole Miss. The award is for distinguished service to the state. Other 1966 winners were Judge J. P. Coleman and Brandon industrialist-agronomist-banker R. D. Morrow.*

## New Medical School Urged for Coast

A proposal to construct a \$50 million medical school complex on the Mississippi Gulf Coast has been endorsed by the Biloxi Chamber of Commerce. Making the presentation for a nine member committee representing Coast cities was Dr. Stanley H. Hackman of Biloxi.

The group is currently investigating having a feasibility study made on the project. Anthony Ragusin, general manager of the Biloxi chamber, said that a site has already been secured for the complex on the Beauvoir property.

Ragusin also said that the new medical school complex would be sponsored by the University of Southern Mississippi and be known as the Jefferson Davis College of Medicine. Rep. William M. Colmer of Pascagoula (D., Miss.) was quoted as

advising that up to two-thirds of construction costs could be provided in federal funds.

There are currently 88 operational and accredited medical schools in the nation with 14 additional units scheduled to begin operation within the next decade. A third medical school for Louisiana, a branch of LSU to be sited at Shreveport, is among the latter.

## New Award Series Offers \$200 Honorarium

Members of the Mississippi State Medical Association presenting scientific exhibits at the 98th Annual Session, Jackson, May 9-12, will compete for the newly-established Aesculapius Award, a joint project of the association and Mead Johnson Laboratories. A cash honorarium of \$200 will be given the awardee together with a permanent plaque.

Dr. James L. Royals of Jackson, chairman of the Council on Scientific Assembly, said that originality, content quality, and excellence of presentation will be considered by the committee of judges. The winning exhibit will be identified during the annual session with a special temporary plaque, and the author will be presented with the \$200 honorarium on May 12 during closing ceremonies.



*The MSMA-Mead Johnson Aesculapius Award-winning scientific exhibit at the 98th Annual Session will be identified with this temporary plaque, but the author will receive a permanent plaque and a \$200 honorarium.*

Purpose of the award, Dr. Royals added, is to stimulate presentation of scientific exhibits at state association annual sessions and to furnish recognition for the author's effort and contribution.





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# State Morbidity Reported Through March 4

The Mississippi State Board of Health reports the following occurrence of morbidity for 1966 through ninth week of the year, ending March 4. Case totals are shown opposite the disease condition.

Tuberculosis, pul. ....	147
Tuberculosis, O.F. ....	2
Salmonella Inf. ....	7
Meningococcal infections ....	4
Hepatitis, infectious ....	55
Mononucleosis, infectious ....	2
Helminthic infections	
Hookworm ....	193
Ascariasis ....	62
Streptococcus infections	
Strep throat ....	835
Scarlet fever ....	2
Mumps ....	127
Measles ....	125
Chickenpox ....	135
Syphilis	
Early ....	141

Late ..... 23  
Gonorrhea ..... 772

## Emory Will Sponsor Radioisotope Course

Emory University School of Medicine has announced a five day workshop in principles, techniques, and interpretation of radioisotope scanning April 11-16 at Atlanta. This course is limited to individuals who have had previous experience with radioisotopes and who wish to add or extend scanning procedures to their diagnostic service.

Participants will work with phantoms and patients on a variety of scanning units to develop familiarity with various units and various radioisotopes and the parameters of scan interpretation. Extensive teaching files will be available for study. A series of lectures covering principles, indications and interpretation of scans will be presented by a select panel.

For further information contact: Joseph L. Izonstark, M.D., Division of Nuclear Medicine, Department of Radiology, Emory University School of Medicine, Atlanta, Georgia 30322.

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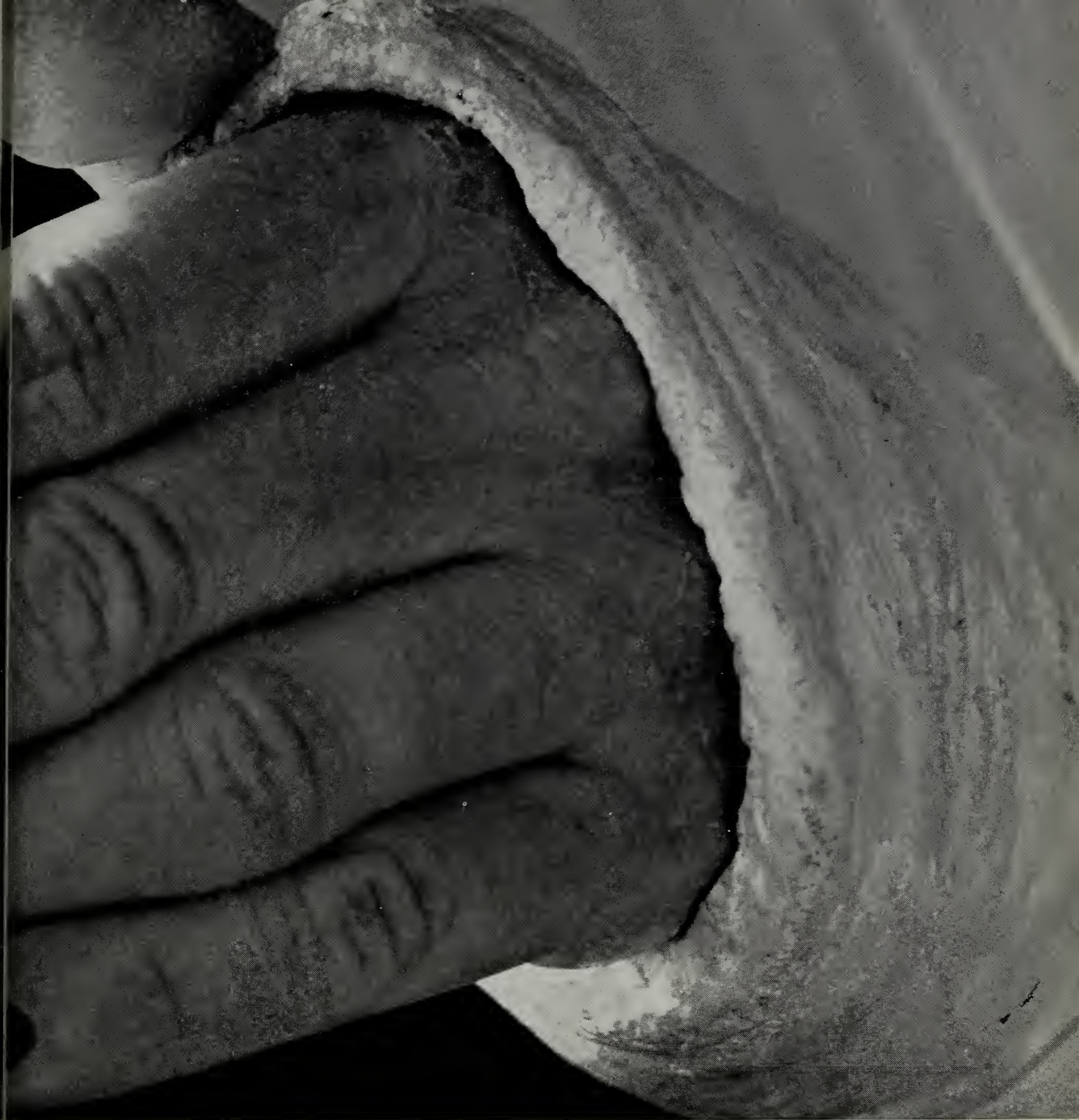
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Vitamin B <sub>6</sub> (Pyridoxine HCl)	2 mg.
Vitamin B <sub>12</sub> Crystalline	4 mcgm.
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Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

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## Medicare Meets Held at Coast, Northeast

The state medical association's two most geographically distant component medical societies, the Coast Counties and Northeast Mississippi, heard presentations on the hospital and medical service aspects of Medicare within a six day period during early March. Dr. Everett Crawford of Tylertown, association president, appeared as principal speaker at each meeting.

The Coast Counties Medical Society met at the Bay Waveland Yacht Club on March 2, and the Northeast Mississippi Medical Society convened at the Canoneer Motel at Corinth on March 8.

Accompanying Dr. Crawford and joining him in panel discussions were the association's executives, Rowland B. Kennedy and Charles L. Mathews of Jackson. Appearing at Corinth also was Whalen Strobhar of Chicago, AMA Field Service Representative.

Association trustees C. D. Taylor, Jr., of Pass Christian and J. T. Davis of Corinth were respective participants in the Coast and Northeast meetings. The two sessions were representative of an informational series being conducted throughout the state on Public Law 89-97, Medicare.

## State Doctors Hold Regal Thrones

Mississippi physicians reigned on many carnival thrones during the recent gala season with a near clean sweep of regal honors on the Gulf Coast.

Two Greenville physicians were uniquely honored in being chosen both king and queen of the annual carnival charity ball sponsored by the Greenville Junior Auxiliary.

On the Coast, Dr. F. C. Minkler of Pascagoula ruled as king at the annual Heart Fund Carnival ball. Dr. George W. Hicks of Pascagoula reigned as king of the Knights of Columbus ball.

In Biloxi, Dr. James E. Alexander held the throne of Kind d'Iberville in the historic Coast Mardi Gras. At the 33rd Annual Carnival Ball sponsored by St. Joseph Academy at Bay St. Louis, Dr. J. B. Levens reigned as king, while Mrs. Levens served as queen.

At Greenville, Drs. Frank M. Acree and Virginia Small Leuckenbach were named to the royal thrones at the Junior Auxiliary's annual carnival ball.

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**Precautions:** Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may

# Miltown® (meprobamate)

possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side effects:** Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very

rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

**Usual adult dosage:** One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

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## MEETINGS

### NATIONAL AND REGIONAL

American Medical Association, Annual Convention, June 26-30, 1966, Chicago. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago, Ill. 60610.

American Academy of General Practice, Oct. 8-13, 1966, Boston. Mr. Mac F. Cahal, Executive Director, Volker Blvd. at Brookside, Kansas City, Mo. 64112.

Southern Medical Association, Nov. 14-17, 1966, Washington. Mr. Robert F. Butts, Executive Director, 2601 Highland Ave., Birmingham, Ala. 35205.

### STATE AND LOCAL

Mississippi State Medical Association, May 9-12, 1966, Jackson. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson.

Amite-Wilkinson Counties Medical Society, Third Monday March, June, September, December. S. E. Field, Centreville, Secretary.

Central Medical Society, First Tuesday, January, March, May, September, November, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. James R. Cavett, Jr., Suite B-6, Medical Arts Building, Jackson, Secretary.

Claiborne County Medical Society, First Monday January and July, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Port Gibson, Secretary.

Clarksdale and Six Counties Medical Society, Third Wednesday March and First Wednesday November, 2:00 p.m., Clarksdale. Robert L. Forman, Coahoma County Hospital, Clarksdale, Secretary.

Coast Counties Medical Society, First or Second Wednesday, January, March, May, September, and November. C. D. Taylor, Jr., 113 Davis Ave., Pass Christian, Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Secretary.

DeSoto County Medical Society, Second Thursday, January, April, July, and October, 1:00 p.m., Mary's Restaurant, Hernando. Malcolm D. Baxter, Jr., McIntosh-Baxter Clinic, Hernando, Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Secretary.

Homochitto Valley Medical Society, First Tuesday Quarterly, Jefferson Davis Memorial Hospital, Natchez. Walter T. Colbert, Jefferson Davis Memorial Hospital, Natchez, Secretary.

North Central District Medical Society, Third Wednesday March, June, September, and December. William B. Hunt, 1196 Mound St., Grenada, Secretary.

Northeast Mississippi Medical Society, Second Tuesday, March, June, September, and December, Corinth. S. Jay McDuffie, Nettleton, Secretary.

North Mississippi Medical Society, First Thursday, April and October, Oxford. M. Beckett Howorth, Jr., 2200 S. Lamar Blvd., Oxford, Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. Joseph C. Griffing, Lucius Olen Crosby Memorial Hospital, Picayune, Secretary.

Prairie Medical Society, Second Tuesday. March. June, September, December. J. M. Griffith, 824 Second Ave. North, Columbus, Secretary.

South Central Mississippi Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. John E. Green, Green Clinic, Hattiesburg, Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg. Patrick G. McLain, 1301 Washington St., Vicksburg, Secretary.



Volume VII  
Number 5  
May 1966



# JOURNAL of the Mississippi STATE MEDICAL ASSOCIATION

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**References:** 1. Editorial: *JAMA* 191:592 (Feb. 15) 1965. 2. Meilman, E., in Moyer, J.H.: *Hypertension*, Philadelphia, W.B. Saunders Company, 1959, p. 395.

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**Side Effects:** *Hydroflumethiazide:* Purpura plus or minus thrombocytopenia, hyperuricemia, leukopenia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)

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Salicylate or steroid therapy can usually be diminished or, in some instances, eliminated.

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Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should not be given when the patient is senile or when other potent chemotherapeutic agents are given concur-

## In rheumatoid arthritis—effective therapy with minimal chance of G-I upset

rently. Large doses of Butazolidin alka are contraindicated in patients with glaucoma.

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Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made. The drug should be used with greater care in the elderly.

### Warning

If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time.

Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea and sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

### Adverse Reactions

The most common adverse reactions are nausea, edema and drug rash. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may

occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

### Average Dosage in Rheumatoid Arthritis

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# NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

May 1966

Dear Doctor:

Biggest news on medical horizon is the oncoming Medicare program which will involve one out of 10 Americans. Second section of this Newsletter is devoted to a special report on developments. Social Security Administration will have 6,000 people working for Medicare in addition to thousands employed by fiscal intermediaries.

Final approval has been given the short, one page claim form for use by physicians and beneficiaries. Designated "Form SSA-1490," it contains only 13 sections and provides for assignment to physician or for claim by the beneficiary.

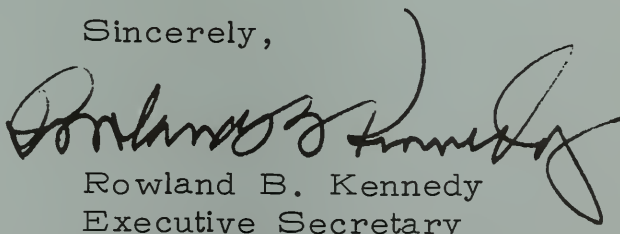
Automotive safety is back in the headlines with calls for Congressional investigations on road-worthiness of 1966 models. Two major manufacturers are calling in some new cars for safety checks: One for throttle linkage and the other, for brakes. A few states are passing new safety inspection laws much tougher than minimum criteria now used.

The National Tuberculosis Association's medical arm, the American Thoracic Society, is mapping a new health education campaign. Subject will be warning of danger of chronic cough and shortness of breath with emphasis on "see your doctor." Campaign will be carried in advertising in nationally circulated magazines and periodicals.

The Food and Drug Administration is seeking new and tighter controls over development, marketing, and distribution of prescription drugs. FDA Commissioner James L. Goddard has attacked industry with a broadside and would even halt sampling to physicians. Industry spokesmen have replied stressing overall record of drugmakers' exercise of responsibility and reliability.

Annual employee physical examinations are reducing absenteeism, promoting fitness, and reducing insurance rates. So says the Mississippi Manufacturers Association, pointing out that the compulsory company-sponsored checkup even tends to cause overweight employees to trim and slim. Trend is for more employers to offer preventive services as part of occupational health programs.

Sincerely,



Rowland B. Kennedy  
Executive Secretary



## DATELINE - MEDICAL AMERICA

Fast-breaking developments in Medicare implementation will result in a flood of last minute information and instructions as the massive program gets under way on July 1. This special report summarizes general direction of developments as machinery is put in motion.

In Mississippi, four groups - one public and three private - are tooling up for Medicare to serve 210,000 citizens in the over-65 bracket:

State Board of Health is the certifying agency for hospitals, extended care facilities (nursing homes), and home health agencies.

Travelers Insurance Co. has been named carrier for Part 1-B supplementary coverage for medical services.

Mutual of Omaha has been named to act as fiscal intermediary for extended care facilities by nursing home operators.

Blue Cross is fiscal intermediary for participating hospitals.

A major communications problem can be expected on extent of services authorized under the program and over the deductibles which are paid by patient. Physicians' fees will be evaluated as to "reasonableness" on fee profiles made by carriers and reviewed by Social Security Administration. There is no fee schedule as such.

Taken into consideration - according to preliminary reports - are "usual" and "customary" fees charged by physicians. Next gradient of judgment is "prevailing" fee level or so-called going rate.

Fee surveys and other studies may be made by carriers as program develops, and carriers may not pay more under Medicare than for comparable services to their regular policyholders.

Hospital-based specialists will be paid from Part 1-B funds, not hospital monies, but an optional billing arrangement through the hospital for certain services is offered. Specialty societies and AMA frown on pooled billing.

An informational handbook is being printed for all beneficiaries, and 20 million copies will be off the press soon. Through mid-April, 16.8 of nation's 19.1 million over-65 citizens have signed with 1 million saying no and 1.3 not yet replying. Because of high OAA welfare rate, Mississippi has substantially less than the national response.





ORIGINAL PAPERS

# Normal and Pathological Patterns Of Lymph Nodes in Lymphangiography

CARLOS M. CHAVEZ, M.D.

Jackson, Mississippi

ONE OF THE MOST INTRIGUING ASPECTS of interpreting lymphangiograms is the variation seen in normal lymph node patterns.<sup>1, 2, 3, 4</sup> Many changes in lymphangiographic patterns have been reported to occur in inflammatory diseases<sup>5, 6, 7</sup> and in neoplastic diseases.<sup>5, 8, 9, 10, 11, 12</sup> However, few have described the morphological changes which have occurred in post-inflammatory and degenerative processes. These can be misleading in the interpretation of an otherwise normal lymphangiogram. In an experience with over 200 lymphangiograms, such changes have been correlated with the disease process by careful observation, follow-up of the patients and/or confirmation at biopsy or autopsy. The lymphangiographic technique, essentially that of Kinmonth et al.,<sup>13</sup> was described previously,<sup>7, 14</sup> and the oily contrast medium employed was Ethiodol (Iodinated ethyl ester of poppy-seed oil fatty acids). In cases in which a radical node dissection was contemplated, an Ethiodol medium into which chlorophyll had been incorporated was used to facilitate identification of the lymphatic structures during surgery.

From the Department of Surgery, University of Mississippi Medical Center and Veterans Administration Hospital.

## NORMAL PATTERNS

The appearance of a lymph node in a lymphangiogram depends on several factors. First, the time which has elapsed between injection and the time the films are taken must be considered. Normally, during the first five to eight hours after the

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*Although lymphangiography does not constitute an absolute diagnostic tool, the procedure does provide a direct method of investigation of the lymphatic system. The author discusses findings and conclusions reached in performing more than 200 lymphangiographic studies. The outstanding radiological features of normal and pathological lymph node architecture are described.*

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slow injection of the contrast medium has been completed, there is a superimposition of images of lymphatic vessels upon lymph node structures. The afferent lymphatic vessels enter the node at multiple points around it except at the hilus; these are straight, fine vessels uniform in size with small valves. The efferent vessels are somewhat larger

with prominent valves; they usually form a bundle of vessels which arise from the hilus, follow a more tortuous course and empty into the next group of nodes. In films taken one to two hours after injection, few nodes are recognizable be-

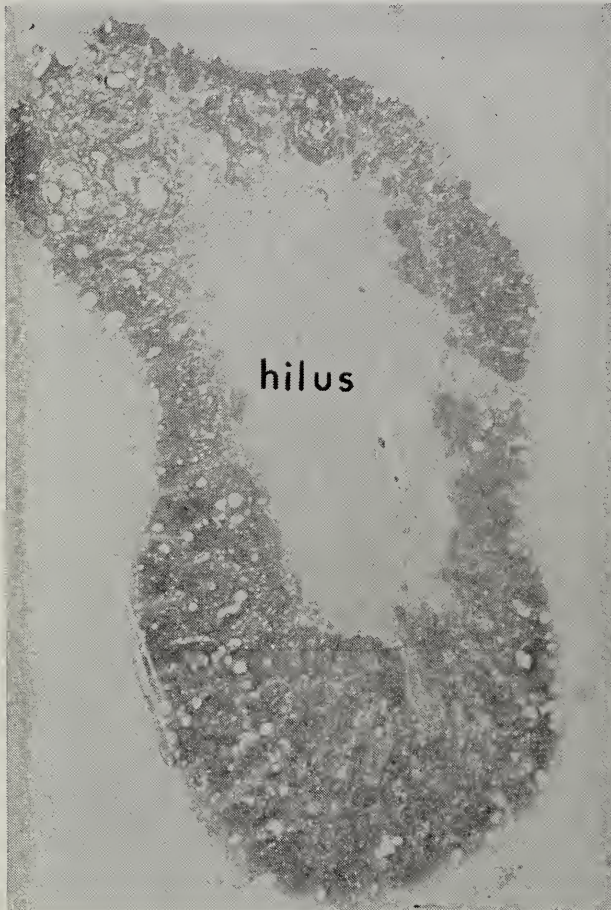


Figure 1. Panoramic view of a normal lymph node showing the location of the hilus and the distribution of the small vacuoles (clear spaces) of the oily contrast medium in the parenchyma. In the upper part they appear conglomerate and represent the efferent lymphatic channels.

cause of the superimposition of the lymphatic vessels and the flow of the contrast medium through the node. However, the presence of foreign material stimulates the reticuloendothelial system to phagocytize the oily particles as they flow through, and these produce radiopacity of the node. This process probably starts as soon as the contrast medium enters the node but it becomes manifest only after the excess oil has been flushed out of the lymph node sinusoids (Figure 1).

In films taken 12-24 hours later there is precise definition of the lymph node architecture (Figure

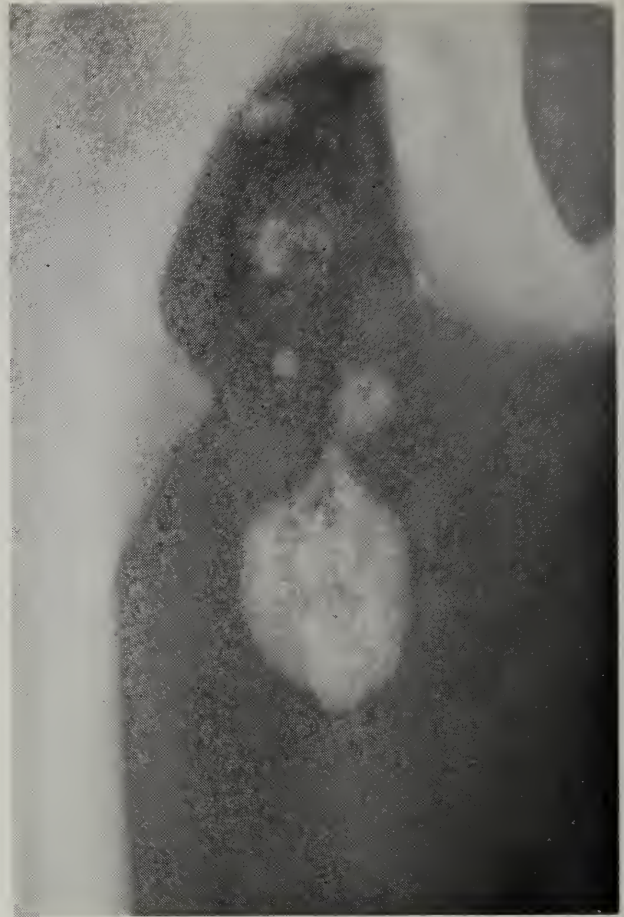


Figure 2. Appearance of a normal inguinal node 24 hours after lymphangiography. Note the uniform distribution of the medium and the clear outline of the node.

2). It presents a fine granular, uniform appearance with a clear-cut outline of the node except at the level of the hilus where a filling defect is noted. This area contains the collector lymphatic trunks and does not retain the contrast medium because of its fibrous structure and lack of reticu-

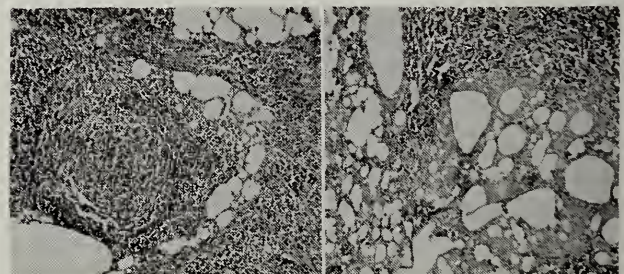


Figure 3. (a) Microscopic view of a lymph node removed a few hours after the injection of the contrast medium for lymphangiography showing the distribution of the oily droplets of the contrast agent around a lymphoid follicle. Mild reaction is seen. (b) Lymph node removed 48 hours after lymphangiography demonstrating the intense foreign body reaction around the oil droplets.



loendothelial cells (Figure 3). The location of the hilus varies with the relationship between the nodes and the area or organ which they serve. The hilus is always opposite the area drained and contains the efferent lymphatic channels. The location of this filling defect will vary with the film projection. If any doubt exists about the significance of such a defect, films should be made from several positions in order to obtain sufficient information.

### NODE SHAPE AND SIZE

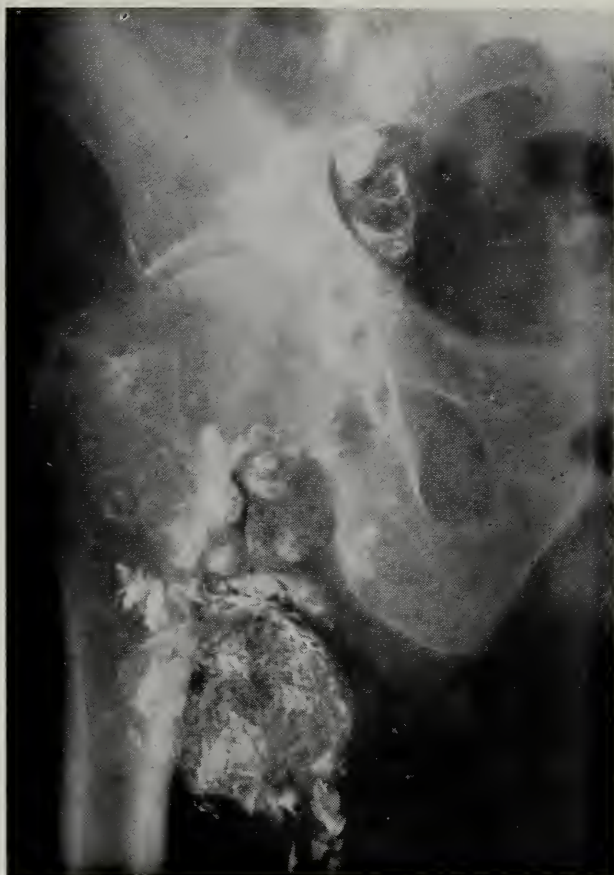
Normal lymph nodes vary widely in size and shape according to their location and the age of the patient. In general, the inguinal and lumbo-aortic nodes are spheroidal and the pelvic nodes have a spindle-like or semilunar shape; however, nodes of both shapes are not infrequently found in either area. Younger people have larger lymph nodes with a succulent appearance in lymphangiograms. This fact should be kept in mind in interpreting lymphangiograms made on children. The older group, on the other hand, presents smaller nodes with a variable incidence of fibrosis and fatty degeneration.

The presence of fibrotic or adipose changes, sometimes seen in the lymph nodes, may also be considered "normal."<sup>15</sup> These changes, especially fibrosis, may have resulted from a previous infection and occur frequently in the lower extremities. In elderly patients, the lymphoid parenchyma is progressively replaced by a loose connective or adipose tissue. This is part of the chronological involution of the lymphoid structures that begins with the thymus. Both of these replacement processes originate at the level of the hilus, especially the involutional changes, and may alter the homogeneous structure of the nodes. At times they produce filling defects in the periphery similar to those seen with metastatic tumors. In these cases the clinical history is most valuable in the differential diagnosis.

### MALIGNANT INVOLVEMENT

Malignant tumors, either primary or metastatic, frequently involve adjacent lymph nodes. Lymphangiography has proven a useful tool in their differential diagnosis.

**Primary tumors (malignant lymphomas).** Lymphomas cause a wide range of alterations in the radiographic appearance of lymph nodes corresponding to the varying degree of invasion of the lymphatic structures. Initially there is a slight enlargement of the nodes without significant changes in the internal pattern, making it impossible to differentiate them from those enlarged



*Figure 4. Typical appearance of a lymphomatous node at the inguinal region in a patient with lymphoblastic lymphoma. Whirlpool and ghost images can be seen (see text).*

because of nonspecific inflammatory disease. The clinical history, as well as the laboratory data, is invaluable in interpreting lymphangiograms in these cases. Once the lymphoma invades the node, specific diagnostic changes gradually develop in the lymphangiogram. Except in cases of Hodgkin's disease, lymphomas can be identified easily in the initial films of the lymphangiogram. Since the enlargement is nonspecific, the identifying characteristic is the loose appearance of the internal structure.<sup>16</sup> Some nodes have a whirlpool appearance and others a reticular, radiating pattern of contrast medium. The amount of contrast medium required to opacify the diverse areas of the upper and lower extremities is larger than the usual, due to the increase in the size and capacity of the lymph nodes. Some nodes show the so-called "ghost image"; that is, very little contrast medium is seen within the node, which is identified mostly by its outline (Figure 4). The passage of lymph, and therefore of the contrast medium, is usually unimpaired in lymphomatous nodes and consequently no signs of lymphedema are found in the majority of these patients.<sup>9</sup> However, if



necrosis occurs, as it may in any malignancy, the lymphatic pathways may become partially or wholly obstructed, the degree depending upon the extent of the necrosis. Occasionally, other unknown factors cause lymphatic stasis in severe malignant lymphoma. The lymphangiographic findings in cases of Hodgkin's granuloma may be

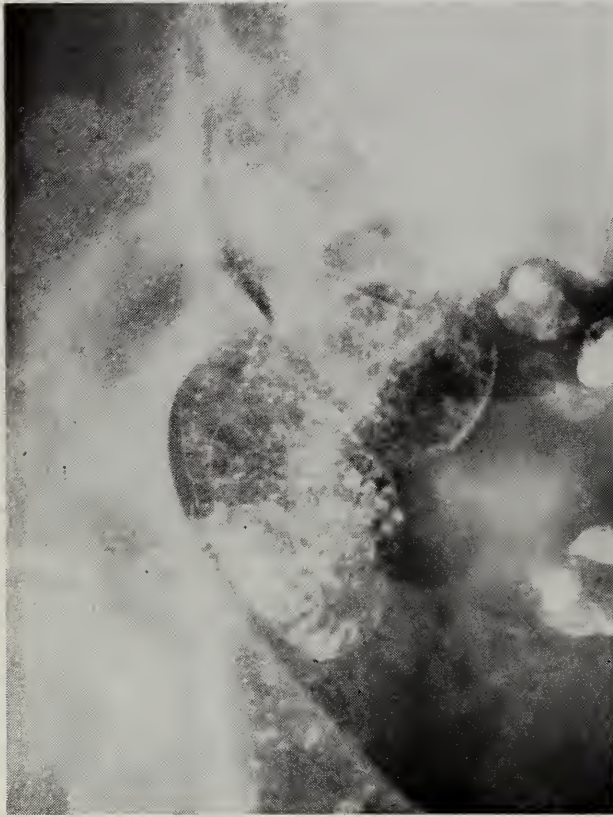


Figure 5. Pathological iliac nodes in a case of chronic lymphocytic leukemia showing the foamy appearance of the nodes in lymphoid tumors.

confused with those found in metastatic lesions of the lymph nodes. In distinguishing one from the other, it is useful to know that the filling defects seen in the nodes of Hodgkin's disease are not closely related to the location of the afferent lymphatics as they are in metastatic node lesions. Granulomatous lymphomas not only displace, but also infiltrate, the normal lymphoid tissue, forming discrete masses similar to those of metastatic tumors and consequently blocking lymph flow.

As the lymphomatous nodes become more and more involved, they merge together forming large masses which are clearly outlined by the contrast medium. The location of the confluent nodes varies from patient to patient. They may be scattered or may be localized in a particular area such as the neck, abdomen, or mediastinum. The



Figure 6. Reticular pattern seen in the lymphangiogram in a patient with Letterer-Siwe's disease (Histiocytosis-X).

lymphomatous node has a rather homogeneous appearance, reflecting the diffuse involvement of the lymphoid parenchyma. The hilus disappears in the conglomerated nodes. Graded degrees of lymph node involvement can be seen in a single patient, and all of the described changes may exist simultaneously, showing a wide range in stages of

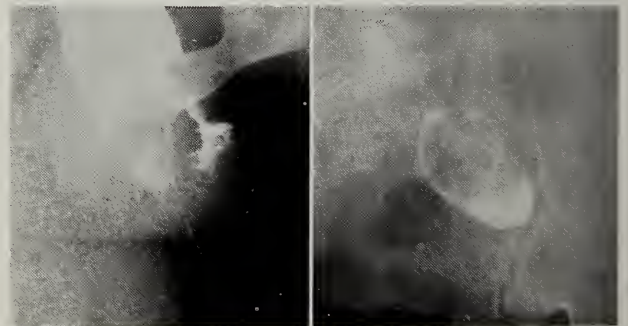


Figure 7. (a) Massive replacement of an inguinal node by tumor in a patient with an epidermoid carcinoma of the leg. (b) Tumor replacement of a pelvic lymph node in a patient with metastatic malignant melanoma of the leg.



transition between normal and frankly lymphomatous nodes (Figure 5).

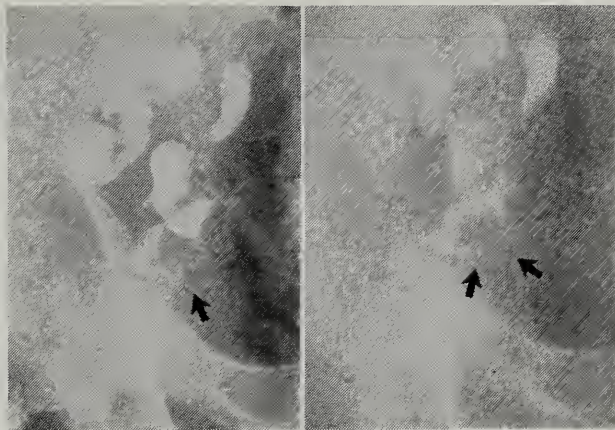
It should be emphasized that if a lymph node biopsy is contemplated, it should precede the lymphangiographic procedure and should preferably be taken from a different area. The reason for this is that the contrast medium produces a granulomatous reaction in the lymph node, which may disguise discriminating histological features. If the biopsy is negative for lymphoma, the lymphangiogram may disclose suggestive or definite changes in the lymph nodes.

If the biopsy is positive, the lymphangiogram will delineate the extension of the disease in the opacified areas, areas which are inaccessible to palpation.

**Metastatic tumors of the lymph nodes.** The malignant cells are spread through the vessels or may invade locally. When disseminated by the way of the lymphatics, the malignant cells are first lodged in the peripheral sinus of the lymph node. The lymph node parenchyma acts as a filter, retaining the migrating neoplastic cells, and growth takes place in the locale of the afferent lymphatic vessels. At this stage, the tumor cells are excentrically distributed in the node. Visualization of these metastatic deposits requires that they be of sufficient size to be detected in the x-ray films. In order to be visible, the metastatic nodule must be 2 mm. or more in diameter. Only after extensive infiltration do the lymph nodes become enlarged. Neoplastic tissue finally displaces the normal lymphoid tissue and stretches the capsule (Figure 7). Some cells penetrate the lymph node barrier and continue their way toward the venous circulation.

There are several lesions which can simulate metastasis in lymphangiograms. We have previously mentioned inflammatory and degenerative processes<sup>5, 7</sup> which frequently occur in the inguinal and/or pelvic and axillary nodes. These cause filling defects of irregular shape and are usually located at, or close to, the hilus. Filling defects produced by malignancies may be obscured by their location in the node. If they are situated on its anterior or posterior side, they may be hidden by superimposition of normal lymphoid parenchyma. Unless pictures are taken from more than one projection or tomographic studies done, they may not be detected in routine anterior-posterior views. Tomographic studies afford better evaluation of suspicious lesions of lymph nodes because they give a more specific definition of the pathological changes.<sup>18</sup> Further experience is needed with this method, but we have used it in a few cases with gratifying results (Figure 8).

The complete replacement of the node by



*Figure 8. Use of tomography in lymphangiography. A better outlining of individual nodes was obtained in this patient having a carcinoma of the penis. The arrows show a filling defect in the tomograms not detected in the plain films.*

tumor leaves no lymphoid tissue, and the sinusoids are consequently blocked by the neoplastic tissue; a collateral circulation develops around the node to by-pass the obstruction. The node then appears outlined by the opacified surrounding lymphatic vessels, creating a "negative image." If numerous nodes of a given region are involved, blockage of the lymphatic circulation is produced, which is enhanced by direct invasion of the lymphatic vessels. Furthermore, local invasion or compression of the venous channels increases the severity of circulatory stasis. This associated alteration can be demonstrated by the venogram, a procedure that should accompany lymphangiography for a more complete evaluation of the patient. In the absence of filling defects in other areas, these findings suggest metastatic invasion of the lymph nodes. Collateral circulation development represents a secondary effect of the obstruction of the lymphatic pathways by tumor replacement. This phenomenon is seldom seen in cases of primary tumor of the lymph nodes, in which the nodes remain permeable throughout the course of the disease. Occasionally, the massive replacement of the node by malignancy or necrosis produces small ghost images which are barely visible (Figure 7). The development of collateral circulation in conjunction with ghost images may arouse suspicion of malignancy, but one should search for filling defects of at least 5 mm. in diameter in order to substantiate a diagnosis of tumor invasion.

**Spread of metastatic cancer cells.** Cancer cells penetrating the lymphatic vessels are carried by the lymph and may be trapped in the first node draining the area, forming a metastasis there. Cells not trapped in the first node may be lodged



in the next one, or the next. The presence of malignant cells in thoracic duct lymph may be explained by failure of the lymph nodes to filter them out or, more probably, by the desquamation of malignant cells from metastatic deposits in the nearest lymph node. Certain anatomical variations, however, permit or facilitate spread of the malignant cells. I have observed in lymphangiograms of some normal individuals that the lymphatic vessels draining a particular area may bypass the first group of lymph nodes and empty into a more distal set; e.g., lymphatics draining the lower extremities may empty in the lumbo-aortic region rather than the inguinal. This means that lymph carrying malignant cells has fewer nodes to pass through before entering the thoracic duct. On the other hand, when an obstruction is present, the developing collateral lymph vessels may bypass entirely the lymph node barrier and empty directly into the thoracic duct or one of its branches. The presence of obstruction may also cause development of lymphaticovenous anastomoses at any level of the lymphatic and venous systems.<sup>7, 14</sup> Under these circumstances, the malignant cell finds a short cut in its travel toward the blood stream.

**Benign lesions of the lymph nodes.** Among the nonmalignant changes which occur and can be demonstrated in the lymph nodes by means of lymphangiography, chronic inflammatory lesions constitute the most difficult to differentiate from malignant processes. Viral diseases may produce enlarged lymph nodes which resemble lymphomas in both lymphangiographic<sup>5</sup> and histological studies. Granulomas localized in the lymph nodes may be mistaken for metastatic carcinoma or Hodgkin's disease. Inflammatory changes discussed above occur mainly in lymph nodes draining the extremities where wounds and infections are not uncommon. A filling defect seen in pelvic or retroperitoneal nodes should be considered malignant in etiology until proved otherwise. One should emphasize the necessity for careful evaluation of the filling defects produced by fibrous or adipose tissue at the nodal hilus.

## SUMMARY

Certain findings and conclusions reached in performing more than 200 lymphangiographic studies have been presented. The outstanding radiological features of normal and pathological lymph node architecture have been described. Emphasis has been placed upon the value of

lymphangiography in the diagnosis of malignant invasion of the lymph nodes. Although this procedure constitutes a direct method of investigation of the lymphatic system, it does not constitute an absolute diagnostic tool, since the interpretation of the images is based upon microscopic evidence. Lymphangiographic studies should be correlated with clinical and laboratory findings.

★★★

2500 North State St.

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# Policy Changes in the Practice of Radiology

ELMER J. HARRIS, M.D.  
Jackson, Mississippi

THE MEDICARE LAW, Public Law 89-97, enacted by the 1st Session of the 89th Congress will have various effects on the practice of medicine. One provision of this law is that the practice of radiology is correctly classified as a medical service, and that the radiologist must submit a separate bill for the professional services which he renders to the patient in the practice of radiology.

Radiologists and other physicians have an obligation to abide with the law of the land and to try to make the Medicare program work. In the past, the patient received a single bill covering the hospital's technical charge and the radiologists' professional fee, all being collected by the hospital. This is no longer possible with Medicare patients.

On October 1, 1965, The American College of Radiology adopted a policy statement on separate billing. This will apply to all patients and not merely to Medicare patients. The American College of Radiology's policy is that its members shall separate their professional fees from hospital charges and present their own bills to all patients expected to pay for services. Charges for technical services connected with radiology will be billed separately by the hospital or institution providing such technical service. The professional charges of the radiologists should no longer be merged with the hospital charges.

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Chairman, Committee on Separate Billing, Mississippi Radiological Society.

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*Policy pronouncements by medical organization on defining the practice of radiology as the practice of medicine and the advent of Medicare have brought the issue of radiologists' billing for their services in the same manner as other physicians into sharp focus. The author, chairman of the Committee on Separate Billing of the Mississippi Radiological Society, discusses the policy background, the decision of the specialty society, and the socioeconomic environment in which the practice of this discipline will be conducted.*

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Also, on October 1, 1965, the House of Delegates of the American Medical Association adopted the following statement:

"Hospital-based medical specialists are engaged in the practice of medicine. The fees for the services of such specialists should not be merged with hospital charges. The charges for the services of such specialists should be established, billed and collected by the medical specialists in the same manner as are the fees of other physicians.

"Furthermore, the AMA intends to continue vigorously its efforts to prevent inclusion in the future of the professional

services of any practicing physician in the hospital services portion of any health legislation."

The Mississippi State Medical Association has previously reaffirmed that the practice of radiology is the practice of medicine and not merely a hospital service. In the light of these pronouncements from the American College of Radiology, the American Medical Association, and the Mississippi State Medical Association, the Mississippi Radiological Society on March 6, 1966, voted approval of the policy of the American College of Radiology in regard to separate billing and voted to put this into effect by July 1, 1966.

For this reason it is believed that this change in policy will be effected by the majority of, if not all, the radiologists in the state. Actually, we feel that we are under ethical obligation to separate these professional fees from hospital charges and to present our own charges to patients. The hospitals, of course, will continue to bill for technical services, including their cost with reasonable profit; but the patient will have a smaller charge from the hospital since the fee of the radiologist will not be collected by the hospital. No significant increase in cost of radiological services should occur as a result of these changes. We believe that these changes can take place with

good relations with the public, with other physicians, and with the hospitals.

The American College of Radiology recommends that the appointment of radiologists to a hospital staff should be based upon the same criteria of personal competence and need for service as used for other members of the medical staff. It recommends that any physician certified or qualified in radiology has the right to apply for a professional staff membership with privileges in radiology in any hospital, but the question of membership on the radiological staff of a hospital is a primary concern of the professional staff and the governing body of the hospital.

Considerations other than the Medicare law were important in organized medicine's taking this stand. The *Principles of Medical Ethics* of the American Medical Association states in section 6 that "A physician should not dispose of his professional attainments or services to any hospital, corporation, or lay body by whatever name called or however organized under the terms or conditions which permit the sale of the services of that physician by such an agency for a fee."

Cooperation among physicians, hospitals, and insurance carriers will be necessary as these changes occur in physician-patient relationship and radiologists-hospital relationships. It is felt that in the long run these changes will be for the best interest of the public, the hospitals, and the medical profession. ★★★

1151 North State St.

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## FACE THE FACTS

They're telling this one in the salons of Paris: President DeGaulle went to see a collection of impressionist paintings. Stopping in front of the first, he said solemnly, "*Magnifique*, this is Renoir.

"*Oui, mon général*," said his aide, "it is *magnifique*, but it is a Manet."

Minutes later, the president paused before a landscape and exclaimed: "No one but van Gogh could do such a countryside!"

"No doubt," replied the aide, "but it happens to be Lantise."

Finally, DeGaulle stopped and peered intensely before a frame. "You can say what you will, but nobody can understand Picasso in this particular period."

"Pardon, *mon général*," humbly offered the aide, "but this is not a Picasso. You are standing in front of a mirror."



# Clinicopathological Conference LXXVI

Conducted by the Department of Pathology  
Street Clinic-Mercy Hospital  
Vicksburg, Mississippi

*Dr. R. H. Fenstermacher:* "The case to be discussed today is that of a 46-year-old man with severe headache of three weeks' duration, slurring of speech, unsteady gait, and progressive lethargy."

## SUMMARY OF HISTORY

*Dr. Lucian M. Ferris:* "This 46-year-old white male patient was admitted to Mercy Hospital-Street Memorial in May 1955, and expired one week later. There was a history of excessive ingestion of alcohol over a period of approximately 20 years, and he was generally considered to be a chronic alcoholic.

"Three weeks prior to admission the patient developed a severe and almost constant headache, localized chiefly over the occipital region. His family physician was consulted and the patient was found to have an elevated blood pressure—the systolic pressure being over 190 mm. of mercury. He was given medication for the hypertension but obtained little relief and over the next few days developed a thick tongue with slurring of speech, unsteady gait and progressive drowsiness and lethargy. At the time of admission, the patient was stuporous, thick-tongued, and somewhat uncooperative. The past history, as related by a member of the family, revealed an episode of sudden loss of consciousness 15 years before, diagnosed at that time as probable subarachnoid hemorrhage due to ruptured congenital cerebral aneurysm.

"Physical examination revealed a semi-stuporous, thick-tongued and uncooperative middle-aged white male. Blood pressure was 190/110, pulse 74, respiration 18 and temperature 98° Fahrenheit. The pupils were equal, regular and reacted normally to light. Funduscopic examination showed narrowing of the retinal arterioles with some blurring of the left optic disc margin on the

nasal side. Bilateral compression of the carotid arteries relieved the severity of the patient's headache. There was no paralysis of the extremities and no evidence of motor weakness, but all deep reflexes were hypoactive. Otherwise, the general physical examination was negative.

"Initial laboratory data were essentially normal with a negative spinal fluid study and normal cerebrospinal fluid dynamics. Routine skull x-ray studies were also negative.

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*The patient in CPC LXXVI is a 46-year-old man admitted with severe headache of three weeks' duration, slurring of speech, unsteady gait, and progressive lethargy. Discussers are Dr. Lucian M. Ferris and Dr. R. H. Fenstermacher.*

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## HOSPITAL COURSE

"Because of the continued cerebral deterioration, a bilateral subtemporal craniotomy was performed and no subdural hematomas were found. Following this, a ventriculogram was done, and these air studies revealed moderate dilatation of the ventricular system and were interpreted as indicating general cerebral atrophy. There was no evidence of area or regional compression or displacement of cerebral content. The condition of the patient continued on a downhill course with further deterioration, increasing coma and fever, and finally respiratory failure.

## DISCUSSION

"Several interesting diagnostic possibilities were suggested on admission of this patient. With headaches and stupor in a known vascular hypertensive, the occurrence of subarachnoid hemorrhage



had to be excluded, and spinal puncture shortly after admission ruled out this possibility. The headaches and progressive stupor might also be indicative of encephalitis but likewise the lack of spinal fluid alterations and other supporting findings would also negate this diagnosis. In a chronic alcoholic, a possibility of injury with resultant subdural hematoma is also a strong diagnostic possibility, but exploratory cranial surgery failed



Figure 1. Tumor on cerebellar surface.

to confirm this suspicion. The finding of generalized cortical atrophy is certainly not surprising in the brain of a long-time alcoholic. This brain atrophy, however, despite the lack of localizing cerebral anatomical deviations on ventriculography, might be indicative of increased intracranial pressure as the result of obstruction by some organic lesion rather than from alcoholic atrophy alone. Consequently, an intracranial expanding neoplasm of some sort was considered as a distinct diagnostic probability before the patient's death, although

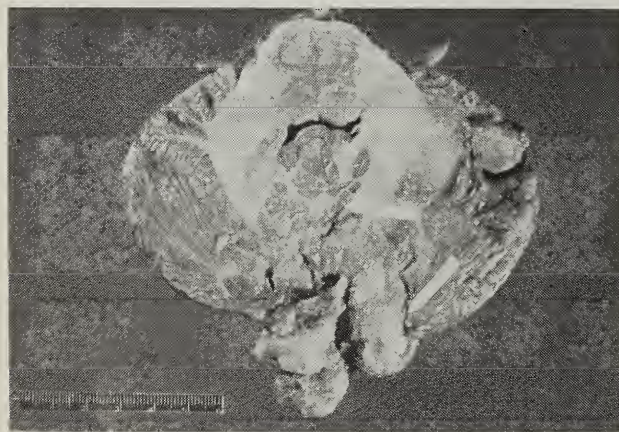


Figure 2. Section of cerebellum showing tumor invasion.

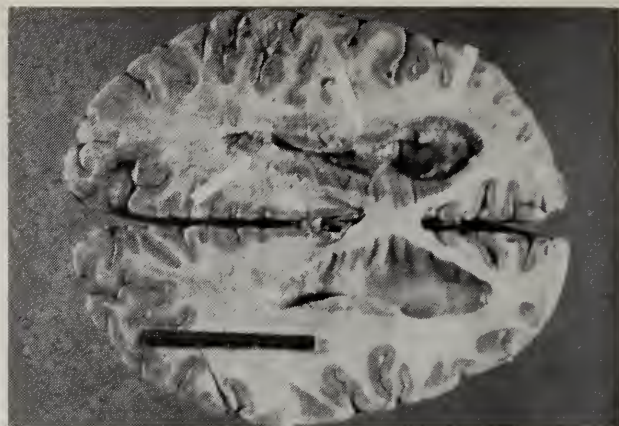


Figure 3. Medulloblastoma in brain ventricles.

exact localization of such a lesion was not possible."

### AUTOPSY FINDINGS

*Dr. R. H. Fenstermacher:* "At autopsy the patient was found to have a friable gray-pink granular tumor measuring 6 x 4 x 4 cm. arising from the superior vermis of the cerebellum and growing downward into the fourth ventricle of the brain.

"The brain was edematous, and the entire ventricular system showed moderate dilatation with numerous tumor nodules studding the walls of the lateral and third ventricles.

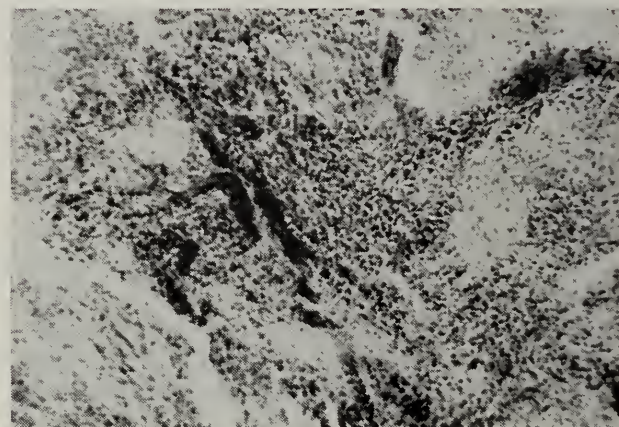


Figure 4. Photomicrograph of cerebellar tumor (X220).

"These nodules were also soft and friable and ranged from 0.5 to 3 cm. in diameter. No tumor nodules were found within the substance of the brain, aside from the tumor in the cerebellum which invaded this structure, producing obstruction to the fourth ventricle and the internal hydrocephalus. The spinal cord was not removed for examination. Microscopic study of the cerebellar tumor showed compactly arranged cells of round or ovoid shape with hyperchromatic nuclei and little intercellular stroma.



"Mitotic figures were present and in a few locations there was a tendency to pseudo-rosette formation. Sections of several tumors on the lining of the brain ventricular system showed the same histologic structure. This was interpreted as a primary medulloblastoma arising in the cerebellum and extending to the lateral and third ventricles of the brain.

"Other pertinent findings in this examination were extensive bilateral bronchopneumonia and acute ulcerative esophagitis. The actual severity and extent of the bronchopneumonia would indicate this lesion as the probable actual cause of death. The liver weighed 1,700 gm. and showed mild fatty change. No other alterations compatible with those seen in cirrhosis were detectable, and this seems noteworthy of mentioning, in view of the patient's past history. There was moderate generalized atherosclerosis. The final diagnoses were:

"1. Medulloblastoma of cerebellum with metastasis to lateral and third ventricles.

"2. Internal hydrocephalus and cerebral cortical atrophy due to obstruction of fourth ventricle by a medulloblastoma.

"3. Bronchopneumonia, moderately severe, bilateral.

"4. Acute ulcerative esophagitis.

"5. Fatty change of liver, mild.

"6. Generalized atherosclerosis, moderate.

## DISCUSSION

"Medulloblastoma is a malignant tumor occurring chiefly in children and arising in the cerebellum. It is said to constitute 18 per cent of the tumors of childhood and involves boys in about 70 per cent of the cases. The relatively rare medulloblastoma of adulthood runs a longer and more chronic course. The common site of the tumor is over the roof of the fourth ventricle usually arising in the vermis of the cerebellum. As growth of the tumor progresses, it invades the cerebellar hemispheres and the fourth ventricle destroying the choroid plexus and producing internal hydrocephalus by occlusion of its foramen. The tumor may transport to the meninges and extend into the subarachnoid spaces. For this reason, brain ventricular extension and migration along the spinal cord is not unusual.

"The malignant cells forming medulloblastomas

are derivatives of primitive neuroepithelium. These cells provide the nuclei of the vestibular nerves in higher vertebrates and these same migrating neuroblasts provide the cells for the retina, adrenal medulla, and sympathetic ganglia of the thoracolumbar regions. All of these migrating neuroblastic cells have similar potentialities to tumor formation in these locations. The tumors are termed medulloblastomas in the cerebellum, retinoblastomas in the eye, and neuroblastomas or sympathicoblastomas in the adrenal medulla. These tumors grow rapidly and are relatively radiosensitive.

"Instances of medulloblastoma metastasizing outside the central nervous system have been observed clinically and at autopsy. Such metastases have been noted as occurring in vertebral and long bones, skull, ribs, sternum and ilium and also in lymph nodes and viscera such as liver, pancreas, kidney, ovary and salivary gland. In some cases it has been suggested that the lesions involved were in reality neuroblastomas or sarcomas with secondary metastasis rather than extraneural metastasizing medulloblastoma.

"In the case under discussion, it was impossible to obtain a comprehensive history. The possibility, however, of the long existence of this lesion must certainly be entertained, although it would seem unlikely that the episode of unconsciousness and coma of 15 years ago ascribed to subarachnoid hemorrhage was caused by this present lesion."

## COMMENT

*Dr. Lucian M. Ferris:* "Reviewing the history of onset of this illness with particular attention to the loss of balance, dizziness, and weakness and other evidences of disturbances in cerebellar function, it appears that more accurate localization of this lesion should have been possible.

## ADDENDUM

"With the development over the past few years of improved diagnostic techniques by cranial arteriography, cerebral scanograms, and cerebrospinal fluid cytology, the definitive preoperative diagnosis of brain neoplasms has been improved. Their value in the patient under discussion, however, would be questionable." ★★★

100 McAuley Dr.

# Radiologic Seminar XLIX: Cysticercosis

ROBERT R. SURRATT, M.D.  
Jackson, Mississippi

HUMAN CYSTICERCOSIS results from infestation by *Cysticercus cellulosae* which is the larval stage of *Taenia solium*, the pork tapeworm. Late in this disease cysticerci may calcify. Such calcification presents a pathognomonic roentgen appearance. For this reason, its review is thought worthwhile although it is a rare disease in this country.

The life cycle of *T. solium* involves man as the definitive host who alone harbors the adult tapeworm and an intermediate animal host usually the hog harboring the larval stage, *C. cellulosa*. Man becomes infested with the adult worm by eating improperly cooked or prepared pork containing *C. cellulosa*. Within the upper bowel the larval worm develops into the long adult tapeworm which remains attached indefinitely to the intestinal wall, expelling ova in human feces. With unsanitary conditions, ingested ova produce the disease cysticercosis in the intermediate host, either the hog or man. Within the upper gastrointestinal tract of the hog, ova hatch, become larvae, pierce the bowel wall, and spread throughout the animal body becoming encysted cysticerci. They remain viable for long periods awaiting completion of the life cycle by human ingestion and adult tapeworm development.

Human cysticercosis results then from oral ingestion of food or drink contaminated by *T. solium* ova from a human carrier. Auto infection may occur in a carrier by self oral contamination or ova may reach the stomach by reverse peristalsis. As in the animal intermediate host, larvae pierce the bowel wall and may by lymphatic or hematogenous spread reach and later encyst within any body tissue or organ.

Sponsored by the Mississippi Radiological Society.

The disseminated cysticerci may create little tissue response. Ill effects are largely due to the location and number of cysticerci. Lodgement in muscles and subcutaneous tissues may be asymptomatic. Death or visual loss may occur with myocardial or ocular involvement. Cerebral cysticerci produce ventricular blockage, convulsive disorders, and sometimes death. During this stage of the disease diagnosis can only be confirmed by biopsy and serologic tests. After variable periods of time the parasites die and may gradually calcify.

Calcified cysticerci are readily visible in radiographs. The nodules may appear patchy with varying degrees of calcification within the cyst wall, cyst fluid, or individual parts of the parasite. Their shape is usually oval or circular. In muscles they seem to adapt to the fibers and are oval with the long axis aligned with the muscle fibers. Within the brain calcification occurs later and less frequently presenting only small rounded shadows. Size is quite variable ranging from small, just visible masses within the brain to much larger round or oval areas in muscles and subcutaneous tissues. It should be emphasized that absence of calcification never excludes this disease. ★★★

4531 Brook Drive

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*Figure 1*



*Figure 2*

*Figures 1 and 2. Views of the arm and thigh of an adult, demonstrating the typical pattern of the calcified larval form of Taenia solium (Cysticercus cellulosae).*

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## IT'S A GASSER

The nation's air lines have quietly solved a semi-medical problem with unobtrusive ingenuity, but the word got out anyhow. It seems that the stewardesses complained that their uniform skirts fitted beautifully on the ground but were tight and uncomfortable in the air.

The experts, including physicists and physicians, discovered that Boyle's Law was the culprit. It seems that Boyle discovered that if the temperature and quantity of a gas stay constant, volume will vary inversely with pressure. In brief, stomach gas gave the girls a middle bulge at jet altitudes.

The stewardesses now have skirts with expandable waistbands.

# Maternal Mortality In Mississippi During 1963

MICHAEL NEWTON, M.D.  
Jackson, Mississippi

THE FOLLOWING is the seventh annual report of studies on maternal deaths in Mississippi conducted by the Committee on Maternal and Child Care of the Council on Medical Service of the Mississippi State Medical Association. Previous reports have covered the years 1957 through 1962. Data for 1963 are now presented. Information has been gathered in the same way as in previous years and is tabulated with the data for 1962 to provide year by year comparison, together with comments on any long-term trends shown by the committee's continuing study over the whole seven year period.

In 1963 the number of maternal deaths reported to the committee decreased sharply to 41 from the previous low of 48 reported for 1961, a decrease of 15 per cent (Table 1). The number of

TABLE 1  
STUDY MATERIAL

	1962		1963	
	NO.	PER CENT	NO.	PER CENT
Total Cases	53	—	41	—
Replies Received	42	79.2	35	85.4
Replies Usable	40	75.5	29	70.7

births in Mississippi fell from 58,921 in 1962 to 57,316 in 1963. The percentage of replies received to the committee's inquiries increased slightly, but the percentage of replies that contained sufficient information so that they could be used by the committee for analysis again fell slightly. In fact, there has been a steady decrease

Chairman, Committee on Maternal and Child Care,  
Council on Medical Service.

in this figure each year from a high of 84.5 per cent in 1960.

The adequacy of the replies improved slightly (Table 2). There was only one case in the lowest category but also only one in the highest which requires that the data sheet be completely filled out, an adequate explanatory note appended and an autopsy performed and reported. The mean adequacy was 2.76, higher than the figure of 2.55 for 1962 and, in fact, the highest in the whole seven years of the study.

TABLE 2  
ADEQUACY OF DATA

CATEGORY	1962		1963	
	NO.	PER CENT	NO.	PER CENT
5	3	7.5	1	3.4
4	3	7.5	7	24.2
3	13	32.5	6	20.7
2	15	37.5	14	48.3
1	6	15.0	1	3.4

The proportion of deaths considered to be due to the complications of the pregnancy itself (direct obstetric deaths) rose to the highest figure recorded in the study (Table 3). The number of deaths due to hemorrhage increased to the highest figure since 1959, and the proportion of deaths due to this cause was the highest since the first year of the study (1955). On the other hand, the number of deaths from toxemia was the lowest since the study began, and this was an encouraging finding. The proportion of deaths considered to be avoidable by the committee was virtually the same as that for 1962 (Table 5). The areas in which avoidable factors were identified



were almost the same as for 1962, with professional factors comprising almost half the total (Table 6).

COMMENT

The response of Mississippi physicians to the committee's letters of inquiry and requests to fill out data sheets remains excellent. Frequently, also, additional summaries are provided which help materially in the committee's deliberations. However, the slight downward trend in the percentage of usable replies is of some concern. Sometimes this is inevitable because the reporting physician has seen the patient only just before or even after death and the circumstances surrounding the case are entirely unknown to him. It is here that performance of an autopsy would be of great advantage.

TABLE 3  
CAUSES OF DEATH

	1962		1963	
	NO.	PER CENT	NO.	PER CENT
Direct Obstetric .....	34	85.0	27	93.1
Indirect Obstetric .....	6	15.0	2	6.9
Unrelated .....	0	—	0	—

On the other hand, there are some cases in which further information might be obtained if a careful review of hospital records and discussion with the persons involved were possible soon after the death. Occasionally members of the committee located in areas near where the death has occurred have been able to do this, and information thus obtained has been valuable. Attempts

TABLE 4  
CAUSES OF DIRECT OBSTETRIC DEATHS

CAUSE	1962		1963	
	NO.	PER CENT	NO.	PER CENT
		OF ALL DEATHS STUDIED		OF ALL DEATHS STUDIED
Hemorrhage .....	14	35.0	16	55.2
Toxemia .....	11	27.5	5	17.2
Infection .....	4	10.0	3	10.3
Vascular Accidents .....	2	5.0	2	6.9
Anesthesia .....	1	2.5	1	3.4
Other .....	2	5.0	0	—

are also being made to send out data sheets more quickly so that the memory of the maternal death will not become too dim in the minds of those who participated in the patient's care. Another way in which the eventual report may be improved is for the attending physician to record at the time adequate notes on the events sur-

TABLE 5  
AVOIDABILITY

	1962		1963	
	NO.	PER CENT	NO.	PER CENT
Avoidable .....	34	85.0	25	86.2
Nonavoidable .....	4	10.0	3	10.4
Undetermined .....	2	5.0	1	3.4

rounding the death. It is hoped that this desirable practice may be encouraged by the committee's studies.

SUMMARY

1. Forty-one maternal deaths occurring in Mississippi during 1963 have been studied by the Committee on Maternal and Child Care. This is the lowest annual total of maternal deaths since the committee's study began in 1957.

TABLE 6  
AVOIDABLE FACTORS

FACTORS	1962		1963	
	NO.	PER CENT	NO.	PER CENT
Professional .....	30	50.8	15	45.4
Hospital .....	7	11.9	4	12.1
Patient .....	22	37.3	12	36.4
Undetermined .....	0	—	2	6.1

2. Twenty-nine usable replies to the committee's inquiries have been reviewed. A slight increase in the number of deaths from hemorrhage and a decrease in those from toxemia are noted.

3. Methods of increasing the number of usable replies to the committee's requests for information are discussed. Emphasis is placed on the desirability of obtaining an autopsy and the importance of making adequate medical and nursing notes at the time when a maternal death occurs.

★★★

2500 North State St.

# Specialized Tests of Thyroid Function

WILLIAM B. WILSON, M.D.

Jackson, Mississippi

THE PROTEIN BOUND IODINE (PBI) and the radioactive iodine uptake ( $I^{131}$  uptake) are the mainstays in the laboratory investigation of thyroid function in current medical practice. These tests are widely available, relatively easily and quickly performed, and are the most reliable available tests of thyrometabolic status.<sup>1</sup>

Despite their advantages, however, the tests have certain limitations. The most common of these is invalidation by iodine contamination. Also the tests may be unreliable in post-therapeutic evaluation of patients who have been treated with tri-iodothyronine (Cytomel), radioactive iodine, anti-thyroid drugs, or surgery.<sup>2, 3</sup> They are unreliable in the evaluation of toxicity in nodular goiter, showing a high incidence of both false negative and false positive results.<sup>1, 4, 5</sup> These tests may give equivocal results in cases where myxedema or toxicity are clinically questionable, and they may not provide the answer in certain types of cretinism. Lastly, they are not useful in diagnosing those types of thyroid disease unrelated to thyrometabolic status, such as Hashimoto's disease and certain cases of nontoxic nodular goiter.

Because of these limitations, there are a number of other thyroid diagnostic studies available, which, while not routinely applicable, may provide definitive answers in the more unusual cases of thyroid disease. Some of these are familiar and time-tested, while others are newer and still somewhat experimental.

## $T_3$ TEST

A new test which is becoming widely used and which has the advantages of being unaffected by

iodine contamination, as well as being an *in vitro* test requiring only a blood sample from the patient, is the  $T_3$  test ( $I^{131}$ -triiodothyronine resin or red cell uptake test). This test measures the degree of saturation of thyroid hormone binding protein, a specific group of plasma proteins which

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*Because in some cases of thyroid disease the BMR, PBI, and  $I^{131}$ -uptake fail to provide a reliable diagnosis, certain more specialized thyroid diagnostic studies are sometimes required. A number of such tests are reviewed, with reference to physiology, test procedure, and interpretations.*

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selectively bind and transport the circulating thyroid hormone.<sup>6</sup> The degree of saturation of the thyroid hormone binding protein (TBP) correlates quite well with the thyrometabolic status of the patient.<sup>7</sup> There is excessive saturation in hyperthyroidism, and relative unsaturation in hypothyroidism. The  $T_3$  test uses  $I^{131}$ -labeled triiodothyronine ( $T_3$ ) to fully saturate all unsaturated binding sites in the patient's plasma, and then measures the amount of remaining unbound  $T_3$ . The amount of unbound  $T_3$  is reported as a percentage of total labeled  $T_3$  added to the plasma sample. In hyperthyroidism, there are few unoccupied binding sites in the plasma, so a high percentage of the labeled  $T_3$  is left over. The converse is true in hypothyroidism.

Studies evaluating this test indicate that it is a promising addition to the armamentarium of thyroid diagnostic studies. Several studies of patients who were classified as to thyrometabolic status by conventional means and then evaluated with the  $T_3$  test have been reported.<sup>8, 9, 10, 11</sup> These generally show about 95 per cent of euthyroid patients to fall within the normal range,

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From the Department of Pathology, Mississippi Baptist Hospital.

Read before the Section on Internal Medicine, 97th Annual Session, Mississippi State Medical Association, Biloxi, May 10-13, 1965.



TABLE 1  
SUMMARY OF RESULTS OF MAIN TESTS  
(Representing composite opinion and intended only as a guide.)

Test	Euthyroid		Diffuse Toxic Goiter		Toxic Nodular Goiter		Hypothyroidism	
	Range	*	Range	**	Range	**	Range	**
PBI (mcg.%)	3.5-8	5	6-20	5	4-20	25	0.2-2.5	0
6 hr. I <sup>131</sup> uptake (%)	7-25	0	30-90	0	5-45	60	1.5-7%	0
24 hr. I <sup>131</sup> uptake (%)	10-50	5	40-90	10	5-50	80	0.5-15	10
I <sup>131</sup> conversion ratio (%)	2-50	0	25-100	5	5-95	60	3-15%	100
BMR (%)	-20:+5	10	-5:+75	10	+5:+35	20	-40:-15	15
T <sub>3</sub> (resin uptake) (%)	24-35	5	35-60	5	not available		20-27	20

\* Percent falling outside normal range.

\*\* Percent falling within normal range.

and 95 per cent of hyperthyroid patients to have elevated values. There is generally some overlap between euthyroid and hypothyroid patients, with 20 per cent of the latter falling in the normal range.

As stated above, the T<sub>3</sub> test is generally unaffected by iodine contamination, regardless of the source. An exception to this is therapy with iodine in hyperthyroidism,<sup>9</sup> and one report of interference by a cholecystographic contrast medium (Oragraffin).<sup>12</sup> The test reflects the thyrometabolic status of patients under treatment with thyroxine or desiccated thyroid, but is low in triiodothyronine therapy. The results of the test are low in pregnancy, apparently because of an elevation of TBP in pregnant patients,<sup>13</sup> and women who fail to show a normal depression of the T<sub>3</sub> test in the first half of pregnancy appear to be in danger of aborting.<sup>14</sup> The test is also low in patients receiving therapy with estrogens, ovulation inhibitors, and propylthiouracil, while high values are found in patients on androgen therapy, anticoagulant therapy, and those in acidosis from any cause, or with leukemia, hemolytic anemia, polycythemia, hepatitis, infection, hypoalbuminemia, advanced malignancy, hypercortisolism, and in patients with atrial arrhythmias.<sup>4, 9</sup>

The normal value of the test varies with the exact method used. With commercially available resin sponges as the secondary binding agent, normal values are 24 to 35 per cent. Hyperthyroidism shows higher percentage, and hypothyroidism, lower.

#### BUTANOL EXTRACTABLE IODINE

The butanol extractable iodine (BEI) test circumvents contamination with inorganic iodine by extracting it, as well as most nonhormonal iodoproteins, from the patient's serum sample prior

to doing an ordinary PBI. Butanol extraction does not eliminate the most troublesome cause of iodine contamination; namely, the organic iodines used in x-ray contrast media. The most definitive use of this test is in the diagnosis of certain goitrous cretins who have a normal PBI level composed mostly of abnormal, nonhormonal iodoproteins. In these patients the BEI is found to be low, thus revealing the true state of affairs.

#### SUPPRESSION TEST

The suppression test is a useful maneuver in the diagnosis or exclusion of hyperthyroidism in borderline cases. In this test, the patient is given 25 micrograms of triiodothyronine three times daily for eight days, which suppresses endogenous thyroid stimulating hormone (TSH) secretion, and normally causes a diminution of the 24-hour I<sup>131</sup> uptake to a range of 10 to 20 per cent. If the uptake fails to drop this much, the test is repeated with a doubled dose of hormone.<sup>3</sup> Resistance to suppression the second time is strong evidence for hyperthyroidism, indicating autonomy of the thyroid or pituitary. This test is reserved for diagnostic problem cases, in which toxicity is still questionable after the usual clinical and laboratory evaluation. Suppression in Hashimoto's disease is normal,<sup>15</sup> but it is variable in toxic nodular goiter. Because of the possibility of thyroid storm, careful patient observation is necessary. Patients with coronary disease or heart failure should be tested with extra caution and with only 50 micrograms daily of triiodothyronine.

#### STIMULATION WITH TSH

Stimulation of the gland with thyroid stimulating hormone (TSH) is another useful physiologic maneuver in diagnosing certain forms of thyroid dysfunction. In this test, a 3-hour I<sup>131</sup>

uptake is done, 5 units of TSH are given intramuscularly, and after 24 hours a background count is taken and another 3-hour uptake done. The normal patient should show a rise of at least 10 percentage points over the control value. The patient with hypothyroidism due to pituitary deficiency should also have a distinct rise of nearly similar proportions, unless the thyroid gland has become atrophic. The patient with myxedema due to primary thyroid disease fails to respond. In Hashimoto's disease, the gland usually has a normal or elevated  $I^{131}$  uptake, but fails to respond further to TSH stimulation,<sup>15</sup> helping the separation of these patients from those with nodular goiter or thyroid carcinoma, who should respond with increased uptake.

TABLE 2

## TESTS OF CHOICE AND USUAL RESULTS IN MAIN DISEASES

<i>Diffuse Toxic Goiter</i>	
1. $I^{131}$ uptake	high
2. PBI	high
3. $T_3$ test	high
4. suppression test	resistant
5. BMR	high
6. $I^{131}$ conversion ratio	high
<i>Toxic Nodular Goiter</i>	
1. PBI	high or normal
2. BMR	high or normal
3. $I^{131}$ uptake	high or normal
4. $I^{131}$ conversion ratio	high or normal
5. (therapeutic trial with Tapazol)	clinical improvement
<i>Nontoxic Nodular Goiter</i>	
1. $I^{131}$ uptake	normal (occasionally high)
2. suppression test	normal (occasionally resistant)
3. PBI	normal (occasionally low)
4. perchlorate test	normal (occasionally positive)
5. $I^{131}$ conversion ratio	normal
6. BMR	normal
7. antithyroglobulin titer	normal
<i>Hypothyroidism</i>	
1. PBI	low
2. $I^{131}$ uptake	low
3. (Achilles reflex)	slow return (rarely normal)
4. BMR	low (occasionally normal)
5. $T_3$ test	low (occasionally normal)
6. TSH stimulation	positive in pituitary myxedema
7. antithyroglobulin titer	often high (up to 100,000)

1. antithyroglobulin antibodies . . . . . high (titer up to 1,000,000)
2. perchlorate test . . . . . positive (iodine discharge)
3. PBI . . . . . low or normal
4.  $I^{131}$  uptake . . . . . high or normal
5. TSH stimulation . . . . . no response

### *Acute, Non-suppurative ("Subacute") Thyroiditis*

1.  $I^{131}$  uptake . . . . . very low
2. TSH stimulation . . . . . no response
3. PBI . . . . . normal or high
4. antithyroglobulin titer . . . . . may be elevated
5. butanol-extractable iodine . . . . . may be low

### *Cretinism*

1. perchlorate test . . . . . positive in certain goitrous types
2.  $I^{131}$  uptake . . . . . high, low, or normal
3. PBI . . . . . low in most types
4. BMR . . . . . low
5. butanol-extractable iodine . . . . . low

### *Tests Unaffected by Iodine Contamination*

1.  $T_3$  test
2. BMR
3. antithyroglobulin titer
4. BEI (eliminates inorganic  $I_2$  only)
5. (Achilles reflex)
6. (therapeutic trial)

## $I^{131}$ CONVERSION RATIO

The  $I^{131}$  conversion ratio measures how much of a tracer dose of  $I^{131}$  becomes converted to protein-bound iodine (i.e., thyroid hormone). It is thus a reflection of hormone secretion rate. Twenty-four hours after a tracer dose of 50 microcuries of  $I^{131}$  is given, blood is drawn and the amount of protein-bound  $I^{131}$  determined. Thyrotoxicosis is diagnosed if the PBI<sup>131</sup> comprises over 50 per cent of the total plasma  $I^{131}$ . This test may yield diagnostic results in cases of questionable hyperthyroidism, and it separates Graves' disease from nontoxic goiter quite well. It is not reliable in toxic nodular goiter<sup>1</sup> and does not delineate hypothyroid from euthyroid patients. It is invalidated by iodine contamination and thyrosuppressive agents.

## PERCHLORATE TEST

The perchlorate test reflects defective synthesis of thyroid hormone. The normal thyroid promptly organifies trapped iodide, and contains little non-organified iodine, while certain goitrous cretins and patients with nontoxic nodular goiter or



Hashimoto's disease may have measureable quantities of inorganic iodine within the gland awaiting organification. Perchlorate causes the immediate discharge of all nonorganified iodine from the gland.  $I^{131}$  is used as the indicator in the test. A tracer dose is given and a 2-hour count done. One gram of potassium perchlorate is given and the gland recounted in one hour. Patients with normal thyroid hormone synthesis show practically no change, while those with defective hormone synthesis show 25 to 90 per cent drop in epithyroidal radioactivity.<sup>2</sup> Some workers feel a 5 per cent drop is significant.<sup>16</sup>

SCINTILLATION SCANNING

Radioactive scintillation scanning of the thyroid gland determines the activity of specific areas within the gland. It has not proven to be of much use in separating malignant or suspicious thyroid nodules from innocuous ones,<sup>17</sup> and even the

TABLE 3  
BEST USES FOR EACH TEST

<i>PBI</i>
1. diffuse toxic goiter
2. hypothyroidism
3. nodular toxic goiter
4. acute, non-suppurative thyroiditis
5. Hashimoto's disease
6. cretinism
<i>I<sup>131</sup> Uptake</i>
1. diffuse toxic goiter
2. hypothyroidism
3. toxic nodular goiter
4. Hashimoto's disease
5. acute, non-suppurative thyroiditis
6. cretinism
7. true iodine deficiency
8. exophthalmos of obscure origin
<i>BMR</i>
1. iodine contamination
2. evaluation of treatment
3. questionably toxic nodular goiter
4. conflicting results of other tests
<i>T<sub>3</sub> Test</i>
1. iodine contamination
2. diffuse toxic goiter
3. hypothyroidism
4. ? toxic nodular goiter
<i>Suppression Test</i>
1. questionable hyperthyroidism
2. Hashimoto's disease
3. non-toxic nodular goiter
4. pre-toxic exophthalmos

*TSH Stimulation*

- 1. pituitary myxedema
- 2. Hashimoto's disease

*I<sup>131</sup> Conversion Ratio*

- 1. questionable hyperthyroidism

*Perchlorate Test*

- 1. Hashimoto's disease
- 2. certain goitrous cretins
- 3. non-toxic nodular goiter

*Butanol Extractable Iodine*

- 1. certain goitrous cretins
- 2. thyroidal injury
- 3. inorganic iodine contamination

*Radioactive Scanning*

- 1. hyper- vs. hypoactive nodules
- 2. substernal goiter

*Antithyroglobulin Antibodies*

- 1. Hashimoto's disease
- 2. myxedema
- 3. acute non-suppurative thyroiditis

nodule which picks up excessive  $I^{131}$  may not necessarily be associated with clinical thyrotoxicity. The test requires expensive equipment and a rather large tracer dose of  $I^{131}$ .

AUTOANTIBODY TESTS

Antithyroglobulin autoantibodies have been found in high titers in cases of Hashimoto's disease, and in somewhat less elevated titers in many cases of primary myxedema. Although a variety of antibodies has been demonstrated, the most practical test for autoimmune antithyroidal activity is with the use of commercially available, tanned, thyroglobulin-coated erythrocytes, which agglutinate when exposed to antithyroglobulin in the patient's serum. In Hashimoto's disease, the titer is 1,000,000 or more in 50 per cent of the cases, and over 250 in 95 per cent of the cases. Titers up to 100,000 are found in myxedema, while in thyrotoxicosis about two-thirds of the patients will have positive titers, ranging up to 25,000. Half the cases of acute, nonsuppurative ("subacute") thyroiditis have positive titers. In nontoxic nodular goiter and thyroid carcinoma the titers are almost invariably less than 250.<sup>3, 18</sup> Thus, in the euthyroid patient with a nontender, diffuse, or nodular goiter, an antithyroglobulin titer of less than 250 would indicate the 90 per cent probability of nontoxic nodular goiter or thyroid carcinoma, whereas a titer over 250 would indicate a 90 per cent probability of Hashimoto's

disease, with extreme titers being of greater diagnostic import.

TABLE 4  
SOURCES AND DURATION OF IODINE  
CONTAMINATION

Source	Duration
iodized salt	no interference
seafood meal	1 day
bread with added iodate (fluffy bread)	1 day
desiccated thyroid or thyroxine	2-4 weeks
tri-iodothyronine (Cytomel)	1-3 days
iodide (KI, cough medicine, Lugol's)	1-2 weeks
topical iodine (tincture, "suntan lotion," ointments, suppositories)	2 weeks
iodoform dressing	2 months
Neo-Pentil (iodinated penicillin)	3-7 days
Diodoquin (amebicide)	1-2 weeks
Hypaque (IVP)	1 week
Conray (IVP)	probably short
Telepaque (gallbladder)	3-6 months
Oragrafin (gallbladder)	probably short
Dionosil (bronchography)	1 month
Hytrast (bronchography)	probably short
Pantopaque (myelography)	1-10 years
Renografin (arteriograms, IVP)	probably short
Cholografin (IV cholangiograms)	4 months
barium sulfate (certain batches)	probably short
BSP dye (certain batches)	probably short

### SUMMARY

Thyroid diagnostic studies which are within reach of most medical communities have been reviewed, with special emphasis on certain little-used tests, which are nonetheless quite valuable in special circumstances. Pertinent data and opinions are presented in tabular form for ready reference.

Points felt to be particularly worthy of emphasis are (1) the  $T_3$  test of thyroid function is reasonably reliable and is generally unaffected by contamination with exogenous iodine; (2) the  $I^{131}$  uptake and PBI are somewhat unreliable in patients who have been treated for hyperthyroidism, and in patients with toxic or nontoxic nodular goiters; (3) Hashimoto's disease is more common than previously appreciated, and can usually be diagnosed without biopsy by the antithyroglobulin test, in conjunction, if necessary, with the perchlorate test, TSH stimulation test, PBI, and  $I^{131}$  uptake.

★★★

1190 North State St.

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## MEETINGS

### NATIONAL AND REGIONAL

American Medical Association, Annual Convention, June 26-30, 1966, Chicago. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago, Ill. 60610.

American Academy of General Practice, Oct. 8-13, 1966, Boston, Mr. Mac F. Cahal, Executive Director, Volker Blvd. at Brookside, Kansas City, Mo. 64112.

Southern Medical Association, Nov. 14-17, 1966, Washington. Mr. Robert F. Butts, Executive Director, 2601 Highland Ave., Birmingham, Ala. 35205.

### STATE AND LOCAL

Mississippi State Medical Association, May 9-12, 1966, Jackson. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson.

Amite-Wilkinson Counties Medical Society, Third Monday March, June, September, December. S. E. Field, Centreville, Secretary.

Central Medical Society, First Tuesday, January, March, May, September, November, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. James R. Cavett, Jr., Suite B-6, Medical Arts Building, Jackson, Secretary.

Claiborne County Medical Society, First Monday January and July, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Port Gibson, Secretary.

Clarksdale and Six Counties Medical Society, Third Wednesday March and First Wednesday November, 2:00 p.m., Clarksdale. Robert L. Forman, Coahoma County Hospital, Clarksdale, Secretary.

Coast Counties Medical Society, First or Second Wednesday, January, March, May, September, and November. C. D. Taylor, Jr., 113 Davis Ave., Pass Christian, Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Secretary.

DeSoto County Medical Society, Second Thursday, January, April, July, and October, 1:00 p.m., Mary's Restaurant, Hernando. Malcolm D. Baxter, Jr., McIntosh-Baxter Clinic, Hernando, Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Secretary.

Homochitto Valley Medical Society, First Tuesday Quarterly, Jefferson Davis Memorial Hospital, Natchez. Walter T. Colbert, Jefferson Davis Memorial Hospital, Natchez, Secretary.

North Central District Medical Society, Third Wednesday March, June, September, and December. William E. Riecken, Jr., P. O. Box 831, Kosciusko, Secretary.

Northeast Mississippi Medical Society, Second Tuesday, March, June, September, and December, Corinth. S. Jay McDuffie, Nettleton, Secretary.

North Mississippi Medical Society, First Thursday, April and October, Oxford. M. Beckett Howorth, Jr., 2200 S. Lamar Blvd., Oxford, Secretary.

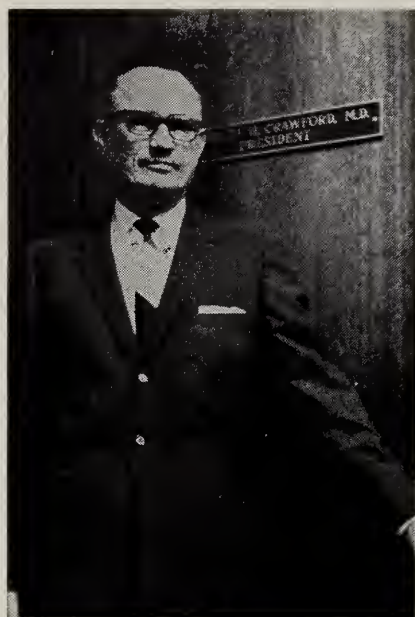
Pearl River County Medical Society, Second Monday March, June, September, and December. Joseph C. Griffing, Lucius Olen Crosby Memorial Hospital, Picayune, Secretary.

Prairie Medical Society, Second Tuesday, March, June, September, December. J. M. Griffith, 824 Second Ave. North, Columbus, Secretary.

South Central Mississippi Medical Society, Second Tuesday March, June, September, and December. Julian T. Janes, Jr., 304 Clark, McComb, Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. John E. Green, Green Clinic, Hattiesburg, Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg. Patrick G. McLain, 1301 Washington St., Vicksburg, Secretary.



# The President Speaking

## 'A Monumental Year'

EVERETT CRAWFORD, M.D.

Tylertown, Mississippi

WITHIN A DOZEN DAYS, the 89th Annual Session of our association shall have been written into the annals of our 109 years of history, and as with the coming and going of the seasons, a new year for Mississippi medicine shall have begun. Valedictories are as inappropriate as they are obsolete in this complex day and age, but a quick look over the shoulder at the past is a good way in which to appraise the future.

This has been a monumental year for American medicine. It has marked the coming of health care financing for a stated biological age group by government. A concept of regional centers for research and demonstration in heart disease, cancer, and stroke has been written into law, an innovation which may be a blueprint for change in the National Institutes of Health grant programs. Community mental health center staffing, new funding for medical education and research, and a host of health and medical programs in the public sector have been developed.

Medical education stands on the threshold of its greatest expansion with 14 new schools scheduled for near or actual operational readiness in the early 70's. Private health care financing, the insurance companies and the Blue plans, is undertaking major revisions in the over-65 areas. Medical organization, especially the American Medical Association, has embarked upon an unprecedented course of activity expansion.

The year has not been easy for medicine, and those who have endeavored to carry the responsibilities of leadership have grappled with new and difficult problems. For my own modest part, I am deeply grateful to all my colleagues from the youngest new member to the senior Trustee for understanding, wise counsel, and friendship which I shall treasure.

★★★





## The Massive Assault on Heart Disease, Cancer, and Stroke

### I

SO MUCH HAS BEEN WRITTEN, so prematurely, and with such notable lack of substance about the Heart Disease, Cancer, and Stroke program that it is scarcely surprising that most of American medicine is largely uncertain about what is going to happen for and to whom when this far-reaching innovation has been brought into being. It is to the bridging of this information gap that many leaders in the clinical and academic spheres of influence are seriously addressing their efforts. Many are enthusiastic, quite a number entertain honest reservations, and a few are puzzled. But the program is being developed, and it will eventually touch almost every physician in some way.

Technically, the program is contained in Title IX of the Public Health Service Act, Public Law 89-239, formally known as an act for "Education, Research, Training, and Demonstrations in the Fields of Heart Disease, Cancer, Stroke, and Related Diseases." The enactment has as its purposes these goals:

—Through grants, to encourage and assist in the establishment of regional cooperative arrangements among medical schools, research institutions, and hospitals for research and training (including continuing education) and for related demonstrations of patient care in the fields of heart disease, cancer, stroke, and related diseases;

—To afford to the medical profession and the medical institutions of the nation, through such cooperative arrangements, the opportunity of making available to their patients the latest advances in the diagnosis and treatment of these diseases; and

—By these means, to improve generally the health manpower and facilities available to the nation, and to accomplish these ends without interfering with the patterns, or the methods of financing, of patient care or professional practice, or with the administration of hospitals, and in cooperation with practicing physicians, medical center officials, hospital administrators, and representatives from appropriate voluntary health agencies.

A second reading of the goals may be necessary to grasp the breadth and long-range objectives of the program. It is clearly suggestive of a new role of activity for major centers of learning, and Dr. Everett Crawford, president of the Mississippi State Medical Association, has observed that the program is "an innovation which may be a blueprint for change in the National Institutes of Health grant programs." In any event, almost nobody—given the bare facts—will underestimate the potential impact of this program in the health care picture.

## II

To oversee planning and implementation of the assault on heart disease, cancer, and stroke, the National Institutes of Health have created the Division of Regional Medical Programs. The new arm of NIH is chaired by Dr. Robert Q. Marston, former vice chancellor of the University of Mississippi and dean of its school of medicine. He carries the rank of associate director of NIH, a portfolio of top significance.

Guidelines for applications for planning grants have been issued by the division, and proposed permanent regulations for regional medical program grants have been published in the *Federal Register*, the final step before formal adoption. In fact, about the only roadblock to the accelerating momentum of the program has been the reduction of available funds by executive action, a temporary slowdown related to the demands of Viet Nam.

Nor is there a lack of interest and action at the grassroots, either, as each probable region begins to take shape. In and around major medical centers, groups of educators, researchers, medical society and voluntary health agency representatives, and those speaking for independent medical institutions such as large hospitals are meeting. Many formal applications are now before the National Advisory Council on Regional Medical Programs, and fiscal 1966 funds are being made available for local planning projects through December of this year.

## III

Amendments and alterations in the original legislation considered by the Congress in 1965 may have made the definition of a region somewhat vague. The final enactment describes a region as a geographic area which forms an economic and socially related region, taking into consideration such factors as present and future population trends and patterns of growth. Further considerations in the definition include the location and extent of transportation and communication facilities and systems, as well as the presence and distribution of educational, medical, and health facilities and ongoing programs.

A secondary factor in the formal definition is the relationship to adjoining regions and lateral communications between them. The regulations say that a region should be functionally coherent, following, where possible, existing patterns and

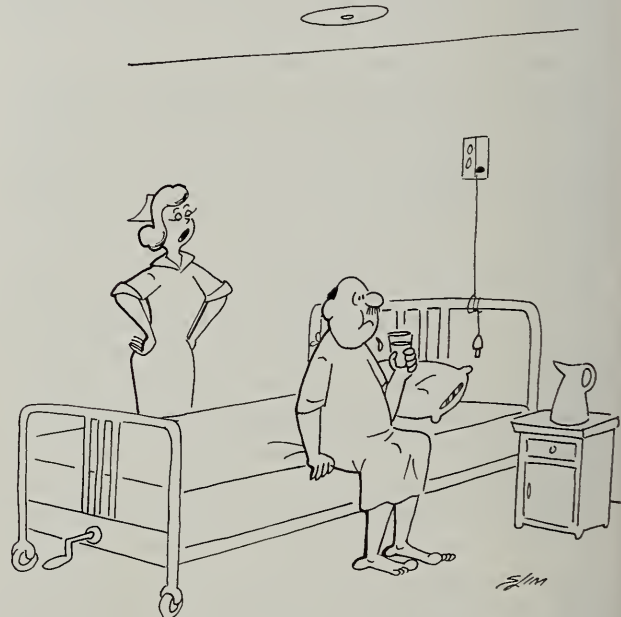
relationships among institutions within it as to patient referral and continuing education. It should have enough population to warrant the use of expensive and complex diagnostic and treatment facilities and techniques.

Of highest significance is absence of mention about political subdivision boundaries. In fact, the proposed regulations define a geographic area as "any area that the Surgeon General determines forms an economic and socially related area. . . ." Participating institutions could thereby reassert their respective spheres of influence and interest beyond state boundaries with the full blessing of law. It is only logical to assume that there may be spirited competition over what might be thought of—for want of a more dignified expression—as territorial rights in heart disease, cancer, and stroke.

## IV

The regional medical program has not only these broad impact potentials but also substantial authorities to bring it into being as a viable creature. There will be funding for major restoration of existing buildings, acquisitions of complex scientific hardware, staffing with highly trained professional personnel, and broad, comprehensive programs of research, training, and demonstration.

Local advisory groups to each regional program will be organized to include "practicing physicians, dentists, nurses, representatives of other



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**Administration and Dosage:** One or two chewable tablets 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation. The recommended dosage should not be exceeded.

**Side effects:** Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is a concomitant administration of a coronary vasodilator.

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health professions, medical center officials, hospital administrators, representatives from appropriate medical societies, voluntary health agencies, representatives of other organizations, institutions, and agencies concerned with activities of the kind to be carried out under the program, and members of the public familiar with the need for the services provided under the program."

At the apex of official medical organization, the American Medical Association has assigned regional program advisory duties to the same top-drawer body whose initial charge was representation of the profession in the development of the Medicare program. The seven member committee is chaired by AMA President James Z. Appel and includes President-elect Charles L. Hudson, Trustees Raymond M. McKeown, Donovan F. Ward, and Dwight L. Wilbur, along with House Speaker Milford O. Rouse, and the chairman of the Council on Medical Service, Russell B. Roth.

No less well known is the committee's panel of consultants who are Drs. Edward R. Annis, Amos N. Johnson, and William O. LaMotte, Jr.

By the time the 90th Congress is elected and seated in its first session, the Regional Medical Program shall have been planned and organized. It may be reasonably expected that the new Congress will have more than a passing interest in its future.—R.B.K.

## Keeping Up: The Quest for Excellence

"The world's fund of scientific knowledge has escalated to staggering proportions in two decades. So rapid and so great has been the geometric increase of the data pool that conventional classification and cataloguing of the printed word are no longer sufficient. But the crux of the problem is moving the knowledge from the initial source to those who must eventually possess it."

This was the opening paragraph of a paper on scientific communication published four years ago in *Medical Times*. If there were a ring of validity and truth in the assertion then, how much louder it rings today, because the intervening years have marked new and important strides forward as the thrust of scientific medical progress picks up momentum and enlarges its frontal sweep.

Now, in 1966, the American Medical Association declares that "the exponential growth of sci-

ence and technology has placed before us a bewildering array of material goods and knowledge. Every year the amount grows larger; the amount added in 10 years is astronomical, and sometimes is appalling to the physician who left medical school a decade or more ago.

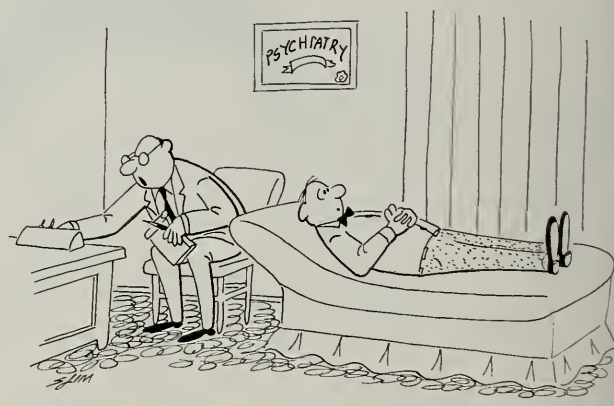
"A two-fold problem is created for the physician by the bulging marketplace: To stay informed of what is available and to be well enough informed to assess qualitatively new goods and ideas, and select for his use those which are appropriate to his practice," the statement adds.

AMA believes that American practitioners did not bring medicine in the United States to its present commanding posture through a just-get-by philosophy. Conceding that a doctor can stay in the medical practice swim by merely adding new drugs and gadgetry on occasion, it is stressed that quantitative and qualitative continuing professional education is not an easy task, but it is a worthy and essential one.

The behavioral scientists tell us that American physicians are substantially above that mysterious level called the average in human intelligence, and almost anyone knows that a doctor of medicine is more often than not a person who makes great demands upon himself in the quest for higher attainment.

The practicing physician has to be quick to learn and able to assimilate new knowledge into his highly specialized level of professional development. But he also has an edge on a majority of others in society in his devotion to excellence, a trait almost indispensable to his calling.

The doctor learns from many sources: From medical journals, new books, a growing array of continuing education opportunities, his colleagues, professional service representatives of drug companies, and from medical meetings. Perhaps the



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**IN BRIEF: ACTION AND USES:** A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

**COMPOSITION:** Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

**ADMINISTRATION AND DOSAGE:** Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

**SIDE EFFECTS:** Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

**PRECAUTIONS:** If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

**CONTRAINDICATIONS:** Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only it is contraindicated in other anemias.

**CARCINOGENICITY POTENTIAL:** Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

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major medical meeting more closely approaches a true synthesis of the major methods of learning process spectrum, because its format is made up of some of each. In the major meeting, say the annual session of the state medical association, AMA, or national specialty society, the physician sees the detail man at the technical exhibit; he exchanges views with his colleagues at their scientific exhibits; he attends the scientific sessions and hears the lectures and essays; and he enjoys a myriad of miscellaneous informational sources.

Of growing importance is the formal postgraduate program, the no-nonsense climate of serious educational endeavor, be it in the university, the hotel meeting room, or the hospital auditorium. Close behind and more easily available is the medical journal, emphasizing the convenience of selectivity and variety.

Finally, there is looming on the postgraduate horizon the "passive" media which will teach without fully monopolizing the busy physician's total attention. Most prominent in this new and exciting area is FM radio education channels. The ultimate medium of convenience will be medical educational TV, and it's closer to reality than one might first suppose. Already, video tape reproducers may be purchased for less than the cost of a sedan in the low priced three, a useful gadget easily within the reach of almost any local medical society or hospital.

No, keeping up with medical science is not easy for the doctor. Were it not for the growing number of ways available to him for doing this, he might be left behind in the backwash of scientific progress. But his inherent intellectual curiosity, his unusual ability to learn, and his need to learn combine to make his quest for excellence into something as real as his stethoscope.—R.B.K.

## More Money Spent and More for the Money

Americans are spending more than ever for the goods and services which they must have and for the frills and goodies which they want. What's more, they have a steadily increasing disposable personal income, to put it in the jargon of the economists, with which to make these purchases. The outlay for the "fourth necessity," medical care, has been increased along with spending for food, shelter, and clothing.

But in examining the Department of Commerce figures for 1964, the most recent year for which complete spending data are available, it's interesting to observe that Americans still plunk down more cash for cosmetics and haircuts than for physicians' services, and they spend more for tobacco than for hospital care.

Health and medical care expenditures in the United States during 1964 amounted to \$25.2 billion, an increase of 7.8 per cent over the 1963 outlay. The hospital share of the medical care dollar held fast to a decade-long pattern of being the greatest, now about 30 cents and still going up. By contrast, the physician's share continues to shrink, falling to 27 cents.

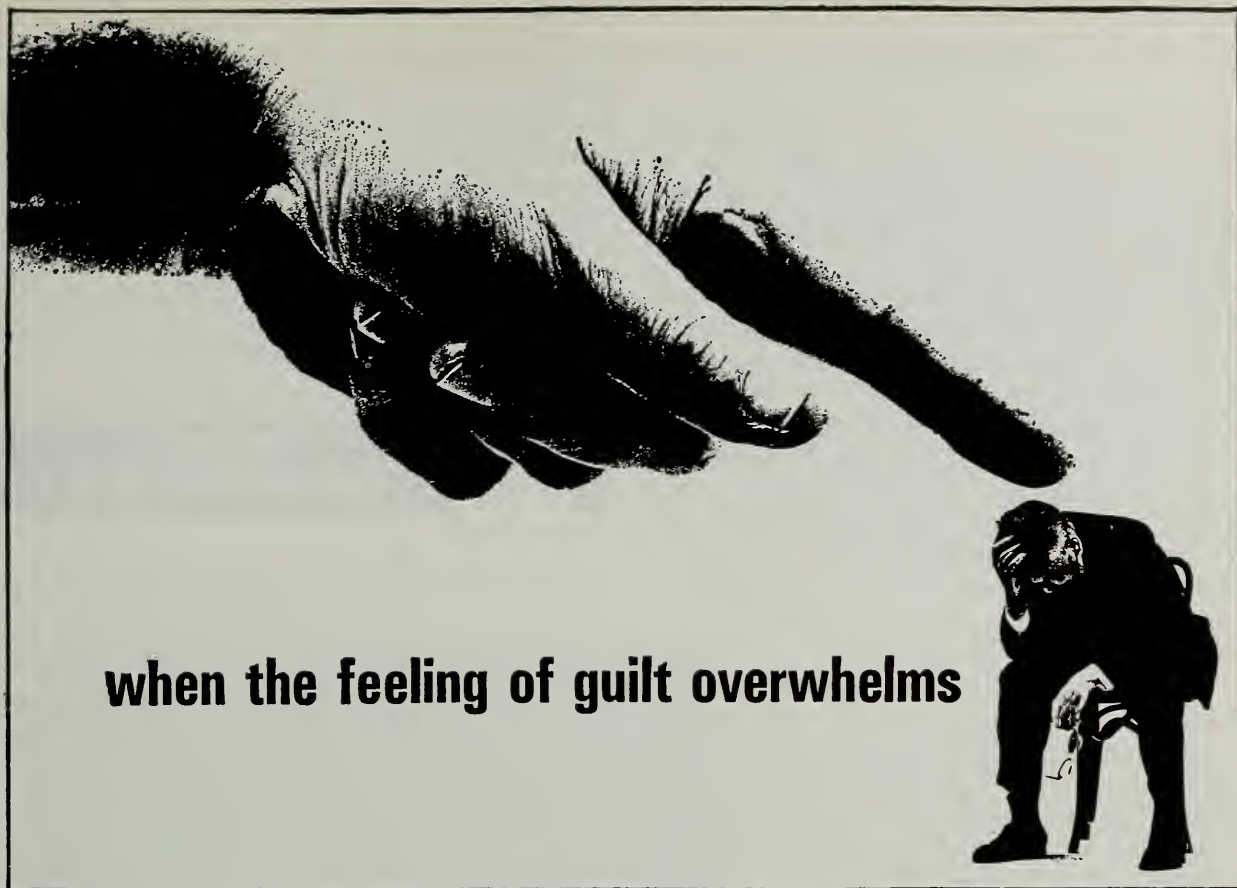
Perhaps the most dramatic decrease may be found in the portion of the health dollar spent on



"We've located your wife. She's the woman down to the left yelling 'chicken.'"

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**Indications:** In depression of any kind—neurotic and psychotic depressive reactions; manic-depressive or involutional psychotic reactions. **Dosage:** Optimal results are obtained at a dosage of two 25 mg. tablets t.i.d. (150 mg./day). **Contraindications and Precautions:** Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established. **Adverse Effects:** Side effects, usually mild may include: dry mouth, constipation, dizziness, palpitation, delayed urination, "bad taste," sensory illusion, tinnitus, agitation and stimulation, sweating, drowsiness, headache, orthostatic hypotension, flushing, nausea, cramps, weakness, blurred vision and mydriasis, rash, allergy, transient eosinophilia, granulopenia, altered liver function, ataxia and extrapyramidal signs. **Supplied:** Norpramin (desipramine hydrochloride) tablets of 25 mg., in bottles of 50, 500 and 1000.

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## EDITORIALS / Continued

drugs: From 23 cents in 1944, the portion for new and improved prescription drugs was 17 cents in 1964. The dentist garners a diminishing share along with his physician colleague, dropping down to 10 cents.

The 7 cents paid for health insurance and prepayment coverage is steady, but less of the dollar now goes for physical appliances and prostheses. The Department of Commerce says that 1964 spending for health care zoomed 12.5 per cent for hospital services over 1963 but went up only 5.5 per cent for physicians' services. There was a 5.8 per cent increase in dental care spending, a 6.3 per cent upping of health insurance purchases, and a 5.2 per cent expansion in drug buying.

But it's important to keep the demand and purchase picture in clear perspective, recognizing that the ability to acquire in terms of ready cash and voluntary financing mechanisms is firmly ahead of the upsurge in buying. Were this not true, there could not have been spending increases for recreation, tobacco, and other items which must be regarded as something a little less essential than the four necessities. Moreover, Americans have never before bought so much with their medical care dollars than they did in 1964.—R.B.K.



## LETTERS

SIRS: I have seen your editorial in the JOURNAL discussing the school health education study which was given its original impetus by the Bronfman Foundation (Teenage Health Education: Youth's Achilles' Heel, J.M.S.M.A. VII:115 (March) 1966).

I am sure that the members of the Advisory Committee to the School Health Education Study are as pleased as I am to find a medical society so interested in the development of health education in schools that it would go to the trouble to comment on this national program editorially.

Thank you for your interest in something which needs medical society support.

DONALD A. DUKELOW, M.D.  
DEPARTMENT OF HEALTH  
EDUCATION  
AMERICAN MEDICAL ASSOCIATION  
CHICAGO, ILLINOIS

SIRS: I appreciate your fine comments on the work of the school health education study. This has been a most unusual study and I think a very productive one. It is so nice to be appreciated by our colleagues in the medical associations.

HERMAN E. HILLEBOE, M.D.  
DELAMAR PROFESSOR OF PUBLIC  
HEALTH PRACTICE  
COLUMBIA UNIVERSITY FACULTY  
OF MEDICINE  
NEW YORK, N. Y.



## NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

BOWER, JOHN DONALD, Jackson. Born Westfield, Mass., Nov. 14, 1931; M.D., Medical College of Virginia, Richmond, 1961; interned University of Virginia Hospital, Charlottesville, one year; residency, Medical College of Virginia, Richmond, three years; member, the American Federation of Clinical Research, the American Society of University Professors, the American Association for Advancement of Science, and the American Society for Artificial Internal Organs; elected March 1, 1966, by Central Medical Society.

BOYD, JOHN WOOD, McComb. Born Jackson, Miss., Aug. 26, 1936; M.D., University of Mississippi School of Medicine, Jackson, 1961; interned USAF Hospital, San Antonio, Tex., one year; captain, U. S. Air Force; elected Dec. 14, 1965, by the South Central Mississippi Medical Society.

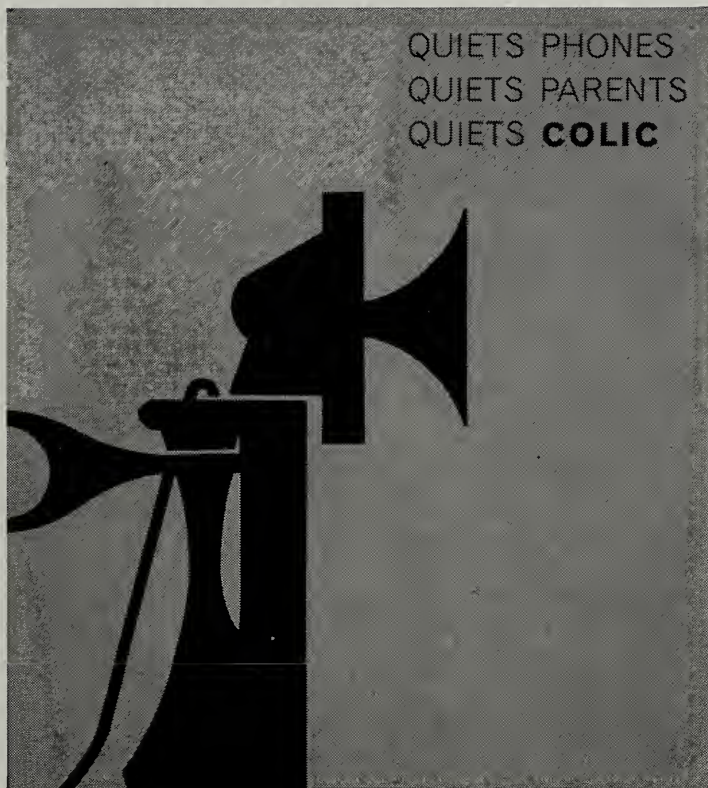
JOHNSON, HUGH RICHARD, JR., Jackson. Born Columbia, Miss., Feb. 2, 1932; M.D., University of Mississippi School of Medicine, Jackson, 1957; interned Methodist Hospital, Houston, Tex., one year; surgery residency, University of Tennessee, Memphis, four years; elected March 1, 1966, by Central Medical Society.

MANNING, JAMES OLIVER, Jackson. Born Jackson, Miss., Aug. 6, 1929; M.D., Tulane University School of Medicine, New Orleans, La., 1959; interned Charity Hospital of Louisiana, New Orleans, one year; orthopaedic residency, Tulane University School of Medicine, New Orleans; residency, Confederate Memorial Medical Center, Shreveport, La.; elected March 1, 1966, by Central Medical Society.



In colicky infants Pediatric Piptal with Phenobarbital slows down spasm, diminishes pain and crying and improves feeding patterns. It permits sleep and rest for patient and family. The less than hypnotic amount of phenobarbital in the recommended dose affords a mild, calming action and enhances the antispasmodic action of Piptal (pipenzolate bromide). The latter drug, as reported in the medical literature, has a favorable ratio of effectiveness to side-effects which is unusual in anticholinergics and thus is particularly appropriate to pediatric use.

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QUIETS PARENTS  
QUIETS **COLIC**



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Pleasant-tasting Pediatric Piptal with Phenobarbital is miscible in milk, formulas and fruit juices, and may also be given by dropper directly on the infant's tongue. Dosage is 0.5 cc. 15 minutes before feeding; in severe cases, 1.0 cc. four times daily. High doses may occasionally cause constipation with tenesmus and, rarely, flushing without fever. It is contraindicated in bowel obstruction or sensitivity to phenobarbital or anticholinergics. Available in 30 cc. dropper bottles, droppers calibrated to deliver 0.5 cc.

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EVERY DAY

## NEW MEMBERS / Continued

PASSMAN, JOHN CARL, Natchez. Born Sicily Island, La., July 25, 1928; M.D., Louisiana State University School of Medicine, New Orleans, 1955; interned Charity Hospital of Louisiana, New Orleans, one year; orthopedic surgery residency, Confederate Memorial Medical Center, Shreveport, La., four years; elected Jan. 15, 1966, by Homochitto Valley Medical Society.

RATCLIFFE, HALL HOLLOWAY, JR., Natchez. Born Ferriday, La., April 24, 1931; M.D., Louisiana State University School of Medicine, New Orleans, 1956; interned Confederate Memorial Medical Center, Shreveport, La., one year; general surgery residency, Confederate Memorial Medical Center, Shreveport, La., four years; Fellow in the American College of Surgeons; diplomate of the American Board of Surgery; elected Jan. 15, 1966, by Homochitto Valley Medical Society.

REID, SHELBY CURLEE, Jackson. Born Booneville, Miss., May 10, 1931; M.D., University of Mississippi School of Medicine, Jackson, 1958; interned University of Oklahoma Hospital, Oklahoma City, one year; residency, South Mississippi Charity Hospital, Laurel; general surgery residency, City Memorial Hospital, Winston-Salem, N. C., two years; general surgery residency, V. A. Hospital, Albuquerque, New Mexico, two years; general surgery residency, St. Joseph Hospital, Lexington, Ky., one year; elected March 1, 1966, by Central Medical Society.

SOLOMON, MORTON, Jackson. Born Detroit, Mich., Dec. 5, 1931; M.D., University of Michigan Medical School, Ann Arbor, 1956; interned Charity Hospital of Louisiana, New Orleans, one year; internal medicine residency, Charity Hospital of Louisiana, New Orleans, three years; elected March 1, 1966, by Central Medical Society.



## PERSONALS

DONALD F. BARRAZA of Natchez has announced the opening of his office in the Medical Arts Building. He will limit his practice to diseases of the skin.

T. G. CLEVELAND of Meridian, an Emeritus member of the association and member of the Fifty Year Club, was honored by the Meridian Con-

sistory of the Scottish Rite Masons, who presented him with a fifty year cap in recognition of a half century of membership in the bodies. In 1963, Dr. Cleveland was honored by the Tulane University, his alma mater, for 50 years of medical practice. He also holds the 50 year pin from the King Solomon Masonic Lodge of Meridian.

ROBERT J. COLE, formerly of Ann Arbor, Mich., and Alexandria, La., has announced the opening of offices in Amory for the practice of general surgery. He is a graduate of Hillsdale College in Michigan, holds the master's degree from the University of Michigan, and received his M.D. from the University of Cincinnati College of Medicine. Dr. Cole is a diplomate of the American Board of Surgery.

GEORGE E. GILLESPIE of Jackson is chairman of the medical division of the Belhaven College \$1.5 million development program. He and other leaders in the project have announced plans for a new women's residence hall as one of the initial building additions to the college. For many years, Dr. Gillespie's father was president of Belhaven.

CLAUDE A. JACKSON of Kosciusko was honored as "Boss of the Year" by the local Business and Professional Women's Club. A special plaque was presented to Dr. Jackson by the BPW president, Mrs. Mary Rhodes, during a banquet occasion when other outstanding citizens of Kosciusko were named.

JAMES B. MARTIN of Monticello has announced the opening of his office on Highway 84 West for the general practice of medicine.

KENNETH P. PITTMAN of Jackson will be installed as a Fellow in the American College of Obstetricians and Gynecologists during its annual meeting at Chicago, May 2-5. To qualify for election and installation as F.A.C.O.G., a physician must have been graduated from an approved medical school, received approved residency training, and limited his practice to ob-gyn for five years.

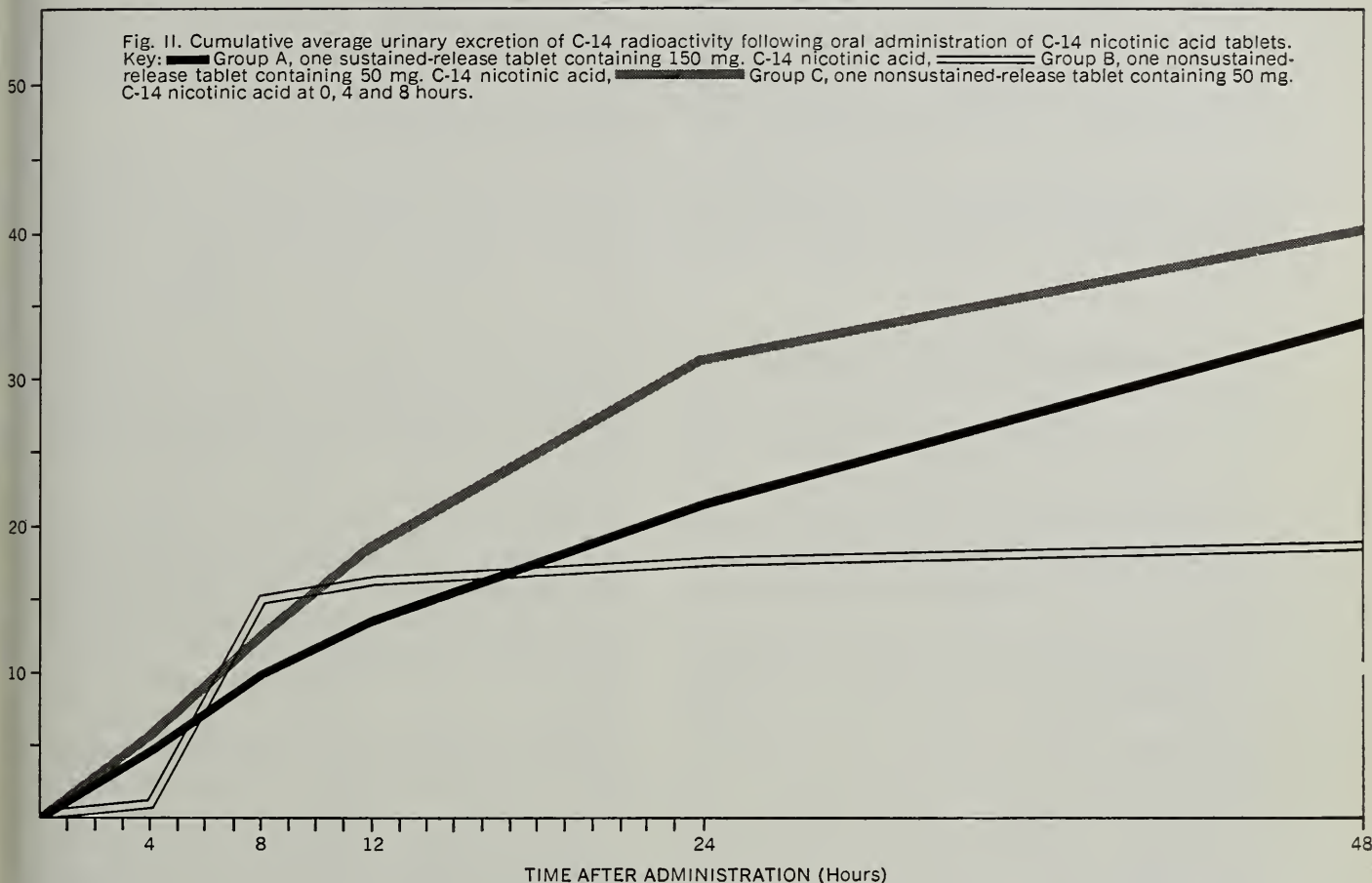
JAMES H. WADDELL of Ocean Springs has been re-elected to membership on the local Separate Municipal District School Board.

M. NEY WILLIAMS of Jackson recently addressed the Civil War Roundtable, a historical society, on medicine and surgery during the Civil War. His paper evaluated military medical practice in the light of scientific knowledge of the mid-19th century.



# ged and debilitated

Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: — Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, — Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, — Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.



less confused and moody. Personal care, memory, emotional stability, social attention improve. Fatigue, apathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will permit your patients to enjoy the benefits of time-prolonged nicotinic acid/pentylenetetrazol therapy, at an economical price. Dosage is only one tablet every 12 hours.

**Contraindications:** There are no known contraindications.

**Precautions:** Exercise caution when treating patients with a low convulsive threshold.

**Side Effects:** Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

**Dosage:** One tablet every 12 hours.

**Supplied:** Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

**References:** 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. 56:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. 11:617 (July) 1960.



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A Subsidiary of Philips Electronics and  
Pharmaceutical Industries Corp.


# Geroniazol<sup>®</sup> TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.  
Tempotrol<sup>®</sup> Time Controlled Tablet

# 115th AMA Convention Slated for Chicago



## DEATHS

 BRANDON, JOHN WILLIAM, JR., Woodville. M.D., Tulane University School of Medicine, New Orleans, La., 1913; a past president of the Amite-Wilkinson Counties Medical Society; Emeritus member of MSMA and member of the Fifty Year Club; died March 22, 1966, aged 76.

RICE, JAMES CALHOUN, Natchez. M.D., Tulane University School of Medicine, New Orleans, La., 1918; died March 22, 1966, aged 76.

## State Morbidity Reported Through March 25

The Mississippi State Board of Health reports the following occurrence of morbidity for 1966 through 12th week of the year, ending March 25. Case totals are shown opposite the disease condition.

Tuberculosis, pul. ....	196
Tuberculosis, O.F. ....	8
Dysentery, Bac. ....	10
Salmonella Inf. ....	7
Septicemia, Staph. ....	1
Meningococcal infections ....	7
Meningitis, O.F. ....	6
Hepatitis, infectious ....	70
Mononucleosis, infectious ....	3
Helminthic infections	
Hookworm ....	249
Ascariasis ....	88
Streptococcus infections	
Strep throat ....	1,329
Scarlet fever ....	27
Mumps ....	152
Measles ....	403
Chickenpox ....	160
Syphilis	
Early ....	198
Late ....	36
Gonorrhea ....	1,003

Population expansion, a subject much discussed in both medical and lay circles, will be one of six topics presented in general scientific sessions at the 115th Annual Convention of the American Medical Association.

The giant conclave is to be held in Chicago June 26-30; the scientific program will be at McCormick Place, and the House of Delegates will convene at the Palmer House.

Scientific sections of the AMA Council on Postgraduate Programs taking part in the general meeting on population expansion will be Preventive Medicine, General Practice, Internal Medicine, Obstetrics and Gynecology, and Pediatrics. The general scientific meetings are open to all physicians attending the annual convention.

Other general scientific meetings on this year's annual convention program will be on the subjects of emphysema, burns, mysterious fevers, community hospital coronary care units, and headache.

In addition to the general sessions, each of the 23 scientific sections will present programs. Many of the section programs will, as in past years, be joint meetings of two or more sections and, in some instances, a specialty society.

Specialty societies joining AMA Sections will include:

—The American College of Chest Physicians, which will join the Section on Diseases of the Chest for an all-day program.

—The American College of Cardiology and the American Heart Association, which will join the Section on Internal Medicine in a half-day session.

—The American College of Clinical Pathologists, which will join the Section on Pathology and Physiology in a half-day session on computers in medicine.

—The International Academy of Pathology, which will join the Section on Pathology and Physiology in a full-day program on tropical medicine.

—The Society for Investigative Dermatology, which will hold its meetings in conjunction with the Section on Dermatology.

—The Association for Research in Ophthalmology, which will meet in conjunction with the Section on Ophthalmology.

The AMA Committee on Blood and the Section of General Practice also will present a joint half-day program.





## Book Reviews

**Anatomy and Surgical Technique of Groin Dissection.** By John S. Spratt, Jr., M.D., William Shieber, M.D.; and Burl M. Dillard, M.D. 97 pages with illustrations. St. Louis: C. V. Mosby Co., 1965. \$9.75.

Our usual source of information comes from the general surgical texts which devote little space to the operative technique and the reason behind the indications for surgery of inguinal glands. This is a complete, concise and authoritative book dealing with a subject which no one surgeon has enough personal experience in to avoid all the pitfalls and acquire a sound surgical judgment. The three chapters discussed in a logical manner are "Anatomy," "Operative Technique" and "Indications for Groin Dissection."

The chapter on anatomy deals only with such structures related to the technique or indications for block dissection. The illustrations are adequate and well placed in regard to the reading matter. In this chapter the importance of angiograms is apparent in the discussion and beautiful illustrations. The one flaw in this book is the omission of the technique detail of these excellent films.

To the casual observer the chapter on the indication for groin dissection may detract from this text. The tables of statistics are many, and the formulas, at a glance, seem difficult. On the contrary, the tables are simple and each one brings out an important statistical deduction. The formulas emphasize in an easy to follow form exactly what is to be gained by block dissection in the various types of clinical problems.

The deductions are clear cut. The criteria for block dissection are dogmatic, based on type, location, and pathology. These authors' discussion and reasoning will definitely broaden our views as to the indications for both prophylactic and therapeutic inguinal block dissection, as the mor-

talidity is nil and the morbidity is greatly reduced by these procedures.

My opinion is that no surgeon or gynecologist should attempt to treat a cancer drained by the inguinal nodes without mastering the concepts of this fine book.

ARCHIBALD C. HEWES, M.D.

**Management of the Patient With Cancer.** Edited by Thomas F. Nealon, M.D. with contributions by seventy-one authorities. 1,067 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. \$27.50.

The purpose of this book as stated by the compiling editor is to furnish essential information concerning cancer of all sites. It is intended as a reference for the general practitioner, internist and general surgeon so that they may best approach the management of the individual cancer patient.

Of the forty chapters the first eleven are in Part I "General Considerations." Here generalizations about pathology, diagnosis and treatment are made. The last chapter of Part I deals with rehabilitation and terminal care of cancer patients.

In Part II "Specific Considerations," twenty-seven of the remaining twenty-nine chapters are devoted to various anatomical areas and the specific diagnosis and treatment for each area. Chapter 39 deals with leukemia and lymphomas. The last chapter concerns tumors peculiar to infants and children.

This is a single volume but includes the experience of seventy-one experts in the field. Your reviewer has found it helpful as a reference source for the palliative care of disseminated carcinoma. Radiotherapy, hormonotherapy and chemotherapy are adequately presented and the latest effective agents are mentioned.

This work could be of help as a reference to any doctor whose duty it is to steer the cancer patient toward the most efficacious treatment.

EVERETT CRAWFORD, M.D.

***too young  
to be so tired...***





**revive interest...restore activity  
promptly with** **Alertonic<sup>®</sup>**

Each 45 cc. (3 tablespoonfuls) contains: alcohol, 15%; pipradrol hydrochloride, 2 mg.; thiamine hydrochloride (vitamin B<sub>1</sub>) (10 MDR\*), 10 mg.; riboflavin (vitamin B<sub>2</sub>) (4 MDR), 5 mg.; pyridoxine hydrochloride (vitamin B<sub>6</sub>), 1 mg.; niacinamide (5 MDR), 50 mg.; choline†, 100 mg.; inositol†, 100 mg.; calcium glycerophosphate, 100 mg. (supplies 2% MDR for calcium and for phosphorus) and 1 mg. each of the following: cobalt (as chloride), manganese (as sulfate), magnesium (as acetate), zinc (as acetate), and molybdenum (as ammonium molybdate).

\*Multiple of adult Minimum Daily Requirement supplied.

†The need for these substances in human nutrition has not been established.

***the need for a tonic knows no age***

Life *can* begin at forty—except when functional fatigue causes her to feel tired all the time; to start losing interest in friends and surroundings; to look and act older than her years. Alertonic—a *prescription tonic*—can help your patient become her normal self again. Alertonic helps relieve mild depression, revive interest and restore purposeful activity promptly...with a formula that is efficient *and* economical. Alertonic contains a mild central stimulant (pipradrol hydrochloride), 15% alcohol, essential vitamins and minerals. No hormones or MAO-inhibiting drugs are included. No iron. No iodine. One pleasant-tasting tablespoonful before each meal comprises the usual daily dose.

**Indications:** 1. Functional fatigue such as that often associated with: a depressing life experience or stressful time of life; advancing years; convalescence; limited activity or confinement. 2. Poor appetite and vitamin-mineral deficiency as they occur in: patients having faulty eating habits; geriatric patients who are losing interest in food; patients convalescing from debilitating illness or surgery.

**Contraindications:** As with other drugs with CNS-stimulating action, Alertonic is contraindicated in hyperactive, agitated or severely anxious patients and in chorea or obsessive-compulsive states.

**Side Effects:** Reports of overstimulation have been rare. Patients who are known to be unduly sensitive to the effects of stimulant drugs should be observed carefully in the initial stages of treatment.

**Dosage:** Adults, 1 tablespoonful; children (over 15 years old), 1 to 2 teaspoonfuls; children (4 to 15 years old), 1 teaspoonful. To be taken three times daily 30 minutes before meals.

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**Merrell**



**Medical Parasitology.** By Edward K. Markell, Ph.D., M.D. and Marietta Voge, M.A., Ph.D. 317 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. \$8.50.

The sometimes pedestrian subject of parasites and parasitism is presented in an interesting and useful format which considers the various infectious agents primarily in relation to their effect upon the host, and to the parts of the body which they infect.

Each chapter dealing with the major parasitic classifications is very generously sprinkled with outline summaries providing characteristics of value in identification of specific parasites and concise comparison keys to aid in differentiation of various amoeba, ova and groups of parasites. Interspersed between the major parasitological divisions are three chapters on procedures in examination of stool specimens, blood parasites and fixatives, and stains and common procedures. These technical chapters are very concise and well written.

A summary chapter listing signs and symptoms evoked by infection with various parasitic organisms and relating these to the most likely parasitic disease is of interest, particularly to the recent graduate. Also there is a fine chapter on therapy of parasitic infections which outlines therapeutic rationale.

This book should fulfill its purpose which is to provide information on diagnosis, therapy and recent advances in the field of medical parasitology. It is concise and well written and is a fine manual for quick reference to valuable information.

WILLIAM D. ATCHISON, M.D.

## PMA, NLM Initiate New Information Project

Private industry and government have announced a cooperative plan to make scientific journal information on drugs more readily available to the scientific community.

Under the arrangement between the Pharmaceutical Manufacturers Association (PMA), and the National Library of Medicine (NLM), PMA will hire and finance four interns in NLM's medical literature indexing and retrieval techniques.

PMA President C. Joseph Stetler said that each trainee will spend part time at NLM and part at PMA learning the principles of the jobs. The two organizations will exchange advice and in-

formation concerning published drug reports and later will share this information with others in the drug field through a PMA Service Center.

Announcing the agreement with Stetler was Dr. Martin M. Cummings, NLM director.

They said the agreement will become effective by July 1, and will run for two years, but that it is intended that the program will extend beyond that period to provide a continuing scientific literature service with special application to pharmaceutical research.

This is the second recent PMA cooperative project with a government agency. In 1965 PMA in cooperation with the Food and Drug Administration and American Medical Association announced formation of a Registry of Tissue Reaction to Drugs at the Armed Forces Institute of Pathology, for studies of autopsy or biopsy tissue specimens from suspected adverse drug reaction cases.

## Mrs. C. C. Long Is Top Auxiliary Guest

The principal out-of-state guest for the 43rd Annual Session of the Woman's Auxiliary to the Mississippi State Medical Association will be Mrs. C. C. Long of Ozark, Ark., first vice president of the AMA Auxiliary. Mrs. Long will be presented to the general session of the May 10 Jackson meeting which will be convened by the president, Mrs. J. Hurd Gaddy of Long Beach, in the Rose Room of the Hotel Heidelberg.



Mrs. Long

Mrs. Long was named first vice president of the AMA Auxiliary in 1965 after completing a three year term as national rural health chairman.

Previous to holding this post, she was 1961-62 southern regional chairman for health careers.

With the background of a distinguished career in community service, Mrs. Long has been PTA president, chairman of the Ozark Community Improvement group, and president of her garden club. She has been elected a life member in the Woman's Society of Christian Service, the missionary arm of the Methodist Church.

In 1956, she was selected as Citizen of the Year in Ozark and named Woman of the Year in 1964 by the magazine, *Progressive Farmer of Arkansas*.





# Top Authorities Will Appear in Nuclear Medicine Symposium at 98th Session

A scientific presentation of national significance will highlight the association's 98th Annual Session when five outstanding authorities on radiation and nuclear physics participate in the Symposium on Nuclear Medicine. Special scheduling

of the symposium on Wednesday morning, May 11, assures no conflicts, according to Dr. James L. Royals of Jackson, chairman of the Council on Scientific Assembly.

Co-sponsored by the U. S. Atomic Energy Commission and the Mississippi State Medical Association, the featured session will have papers by Drs. H. D. Bruner of AEC's Division of Biology and Medicine, George V. Taplin of the University of California at Los Angeles, Paul V. Harper of the University of Chicago, Gould A. Andrews of the AEC Oak Ridge installation, and James L. Born of the University of California at Berkeley.

Dr. Everett Crawford of Tylertown, association president, will keynote the symposium with a paper, "Radiation: The Inherent Factor in our Environment."

The Atomic Energy Commission is furnishing two special scientific exhibits as adjunctive features to complement the symposium. The exhibits will be under the supervision of Mrs. Betty Lockridge of Washington, D.C. who is in the AEC Division of Biology and Medicine.

Subjects of the exhibits are "Heavy Particles in Experimental Medicine and Therapy" and "Fallout in Perspective." Both will be located in the Scientific Exhibit section of the Olympic Room at the Hotel Heidelberg, headquarters for

the annual session.

Dr. Bruner will discuss the "Role of the Atomic Energy Commission in Biomedical Research." He has been closely associated with medical aspects of the commission's work, a phase often overlooked and overshadowed by its mission in weapons production.

Dr. Taplin, who is professor of radiology at U.C.L.A., will take as his subject "Use of Isotopes in Diagnosis: Scanning." Dr. Harper, professor of surgery at the University of Chicago, will speak on the "Uses of Isotopes in Therapy."

The director of the medical division of the Oak Ridge Institute of Nuclear Studies, Dr. Andrews, will consider "Problems of How to Treat Radiation Injury: Contributions to General Medicine."

Closing the formal presentations, Dr. Born, assistant director of the University of California's Donner Laboratory, will discuss "The Use of the Cyclotron and Other High Energy Sources for Therapy in Research."

The second portion of the symposium will be a panel discussion by the five essayists. Programmed time for the session is from 9:30 a.m. until noon. Association members will be permitted to invite nonmedical scientists and teachers having an interest in the nuclear field as relates to medical research and treatment.

Dr. Royals said that organization of the special sym-



*Dr. Bruner*



*Dr. Harper*



*Dr. Andrews*



*Dr. Taplin*



*Dr. Born*

## ORGANIZATION / Continued

posium was begun in 1965 after the Council on Scientific Assembly had made the decision to sponsor such a presentation of unusual stature with the best authorities available. Conferences with AEC representatives followed. Dr. Royals said that consultation was requested and secured from local radiologists with special interest in the field. The final program was suggested by Dr. Bruner who represented the AEC in the discussions.

The 98th Annual Session formally opens with the House of Delegates on Monday morning, May 9, at 9:30 a.m. Reference committee meetings will occupy the afternoon with the Scientific Assembly opening Tuesday morning. Dr. Royals said that the new format was designed to eliminate scheduling conflicts between reference committee meetings and scientific sessions.

General sessions Tuesday will cover ob-gyn, surgery, and medicine. Following the symposium on Wednesday morning, there will be consecutive general sessions on general practice and preventive medicine. The Thursday morning, May 12 program will be devoted to sessions on EENT and pediatrics. The adjourned meeting of the House will be conducted Thursday afternoon when final reference committee reports are made and 1966-67 officers are elected.

A full range of social events including alumni reunions and a Latin American Fiesta, the association's annual party, will occupy night schedules. The annual golf tournament will be held at the new Jackson County Club on May 11. Specialty society and related meetings have been scheduled.

At closing ceremonies, Dr. James T. Thompson of Moss Point will be inaugurated 1966-67 president of the association.

## AMA President Will Speak at May Meet

Dr. James Z. Appel of Lancaster, Pa., president of the American Medical Association, will appear at the opening meeting of the House of Delegates on May 9 as the principal speaker. This was the announcement of Dr. Everett Crawford, president of the state association, who said that the AMA president would arrive from San Diego for the 98th Annual Session.

Immediately following his appearance, Dr. Appel will leave for Hawaii where he will appear

at the annual session of the newest state's medical association.

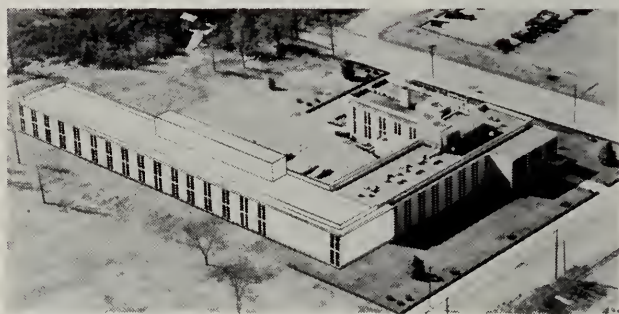
Dr. Appel will be accompanied by Mrs. Appel and said that they expect to be in Jackson two days.

## Robins Will Double Research Center

A. H. Robins, Richmond (Va.) pharmaceutical manufacturer, has announced plans to double the size of its research center.

E. Claiborne Robins, president of the company, said the \$2 million project is being undertaken to keep pace with the company's growing research and development program.

To be added to the present L-shaped center is an east wing that will give the company's research staff more working room and provide for future expansion of its activities in chemical research, pharmacology, biochemistry, microbiology and pharmacy research.



*Retouched photo of A. H. Robins research center shows new expansion which will add 54,000 square feet to the facility. The project will cost \$2 million.*

The addition, containing approximately 54,000 square feet of space on two floors and a basement, will be connected to the present building at the northeast corner.

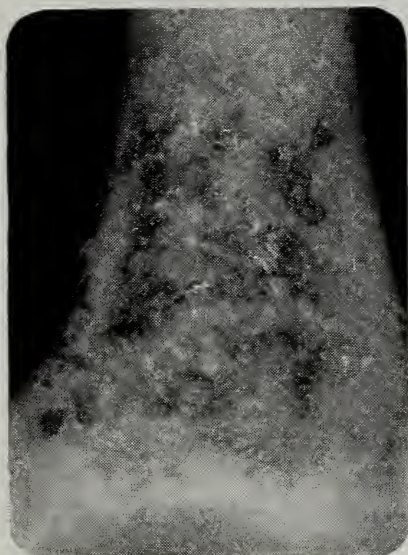
Mr. Robins said work is scheduled to get under way in July and that the new facilities are expected to be ready for use in July 1967.

In announcing enlargement of the research center, Mr. Robins pointed out that the company now has 80 scientists and technicians working there, almost twice as many as were employed when the center was opened in February 1963.

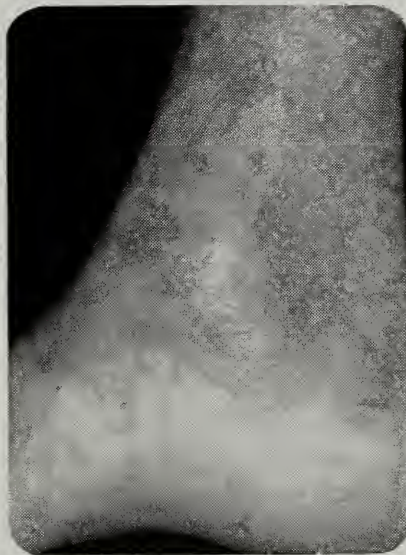
A. H. Robins, founded in 1878, produces a line of ethical pharmaceuticals which are marketed throughout the United States and in approximately 55 foreign countries. Its best-known products are those designed for treatment of coughs and colds, antispasmodic drugs for use in gastrointestinal disorders and skeletal muscle relaxants.



# eczema: scourge of childhood



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atopic eczema of long standing*



*After treatment — with ARISTOCORT  
Topical Ointment 0.1% for two weeks*

ARISTOCORT® Triamcinolone Acetonide Topicals have proved exceptionally effective in the control of various forms of childhood eczema: allergic, atopic, nummular, psoriatic, and mycotic.

In most cases responsive to topical ARISTOCORT, the 0.1% concentration is sufficiently potent. The 0.5% concentration provides enhanced topical activity for patients requiring additional potency for proper relief.

**Administration and Dosage:** Apply sparingly to the affected area 3 or 4 times daily. Some cases of psoriasis may be more effectively treated if the 0.1% Cream or Ointment is applied under an occlusive dressing.

**Contraindications:** Tuberculosis of the skin, herpes simplex, chicken pox and vaccinia.

**Precautions and Side Effects:** Do not use in the eyes or in the ear (if drum is perforated). A few individuals react unfavorably under certain conditions. If side effects are encountered, the drug should be discontinued and appropriate

measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyoderma will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

**Packages:** Tubes of 5 Gm. and 15 Gm.; ½ lb. jar.

PHOTOGRAPHS COURTESY OF M. M. NIERMAN, M.D.

# Aristocort®

Topical Ointment 0.1% and Cream 0.1%, 0.5%  
Triamcinolone Acetonide

Also available in foam form and with neomycin.



LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

## Natchez PG Group Hears Dr. Muelling

A prominent forensic pathologist was guest speaker at the recent meeting of the Natchez Postgraduate Medical Association, a local group which limits its activities to continuing professional education.

Dr. Rudolph Muelling is chief of the Division of Forensic Pathology at the University of Kentucky School of Medicine at Lexington. His paper, delivered at the Jefferson Davis Memorial Hospital auditorium to the association, was entitled "Suspicious Deaths."

The speaker stressed the cooperative role of pathologists with other members of the profession in examining bodies to determine causative factors of death, especially suicide and homicide. He said that in California during 1965, about 60 per cent of all automobile crash fatalities involved single driver-occupant, single car mishaps, suggesting the possibility that many such accidents are, in fact, suicides.

Dr. Muelling was introduced by Dr. Catherine Goetz of Jackson, assistant professor of pathology at UMC. Forty physicians attended the meeting.

The program was made possible by a Merck, Sharp, and Dohme postgraduate education grant.

## Dorsey Begins New Communications Plan

A new departure in medical communication has been inaugurated by Dorsey Laboratories of Lincoln, Neb., according to a joint announcement by Dr. Raymond C. Pogge of the pharmaceutical manufacturing firm and Dr. Frank B. Ramsey, president of the State Medical Journal Advertising Bureau, national representative for the 34 accredited state medical journals.

The new format, which appears in this issue of the JOURNAL as a four page, full color presentation, combines medical service information in editorial form together with product communication.

Tentative plans by Dorsey call for seasonal presentations on a variety of its drug products.

## Mean Work Loss Is 5.5 Days Per Year

Members of the U. S. labor force, now more than 70 million, each lose five and a half days a year on an average from work because of illness or injury. This is the finding of the Health Insurance Institute in an analysis of data from the recent U. S. National Health Survey. Highest loss rate is among farmers with 7.2 days per year.

The HII-NHS study covered a 12 months period. A finding of interest is that women workers had a slightly lower work loss record than men with 5.3 days for women against 5.6 for men. Although the loss rate tends to increase with age, it was found that over-65 employed women enjoyed an off-work loss of only 3.5 days per year.

Study findings suggested that males, due to family responsibilities, tended to try to work in spite of infirmities.

## UMC Gets \$10,777 AMA-ERF Gift



*Presenting Dr. John A. Gronvall, acting dean of the University Medical Center, left, with \$10,777 is Dr. Raymond F. Grenfell of Jackson, chairman of the association's Committee on AMA-ERF. The gift represented \$2,853 in undesignated, prorata funds and \$7,924 in gifts designated for the University of Mississippi School of Medicine. Most of the latter was contributed by MSMA members and the Auxiliary.*



# PENTID<sup>®</sup>-SULFAS FOR SYRUP

## SQUIBB BUFFERED PENICILLIN POWDER WITH SULFADIAZINE, SULFAMETHAZINE, AND SULFAMERAZINE

the fruit punch  
that packs a wallop



Pentid-Sulfas for Syrup is a real knock-out when it comes to good taste. And, with a single prescription, you provide an anti-infective that combats both gram-positive and gram-negative bacteria. Notable for its economy, Pentid-Sulfas for Syrup is everybody's choice, patient, parent and physician.

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For full information, see Product Brief.

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## AMA Auxiliary Sets Chicago Meet

The Woman's Auxiliary to the AMA will hold its 43rd annual convention June 26-30. More than 2,000 physicians' wives are expected to attend the meeting at Chicago's Drake Hotel.

Leading the Mississippi delegation will be the immediate past president of the Woman's Auxiliary, the then-president, and the new president-elect who will be named at the May 10 annual session at Jackson. The two former leaders are Mrs. J. Hurd Gaddy of Long Beach and Mrs. J. Gordon Dees of Jackson.

A highlight of the four-day session will be a talk by Richard C. Cornuelle, author of *Reclaiming the American Dream*. Mr. Cornuelle will speak at the June 27 Guest Day luncheon, to which representatives of national voluntary women's organizations will be invited.

Other events will include the June 26 reception honoring Mrs. Richard A. Sutter, St. Louis, Mo., Auxiliary president, and Mrs. Asher Yaguda, Newark, N. J., president-elect.

On Tuesday, June 28, national past presidents and AMA officers, trustees, and their wives will be guests of honor at a luncheon. James Z. Appel, M.D., AMA president, will be the speaker, and Auxiliary contributions to the AMA Education and Research Foundation will be presented. To date, the doctors' wives have raised more than \$2 million for the foundation.

During convention business sessions, national chairmen will report on Auxiliary-sponsored community service programs in safety, rural health, disaster preparedness, mental health, health careers and international health activities.

Officers for 1966-67 will be elected Wednesday, June 29, and Mrs. Yaguda will be installed as president Thursday, June 30.

## MUST Clinical Lab Undergoes Test

A prototype clinical laboratory, the latest development in a series of MUST (Medical Unit Self-contained, Transportable) components comprising the radically new field Army hospital, is now undergoing evaluation and testing by the U. S. Army Medical Service.

The new laboratory, capable of providing clinical determinations required in support of a 400-bed Army evacuation hospital, is an integral part of the MUST complex of collapsible shelters developed for the U. S. Army Medical Service.

## Drug Makers Call Control Seminar

The second seminar on Control Procedures in Drug Production will be held July 17-22 at the Hershey Hotel in Hershey, Pennsylvania, the sponsors announced today.

This year's seminar will again stress "current good manufacturing practices" and will bring together the best information available to university, government and business on quality controls in drug production.

Sponsors are the University of Wisconsin's School of Pharmacy and the Extension Services in Pharmacy of the University Extension Division, in cooperation with the Pharmaceutical Manufacturers Association (PMA) and the U. S. Food and Drug Administration (FDA) of the Department of Health, Education and Welfare.

## Doctors Day Is Observed in Lowndes



Observance of Doctors Day at Columbus found the youngest and oldest physicians in Lowndes County giving Mrs. A. E. Brown, past president of the Woman's Auxiliary to MSMA, an informal checkup. Left is the youngest, Dr. B. G. Nagle, an ophthalmologist, and right, the senior, Dr. William E. Richards, an 1895 graduate of Jefferson Medical College. (Commercial Dispatch photo)



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# JOURNAL of the Mississippi STATE MEDICAL ASSOCIATION

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# When uncontrolled diarrhea brings a call for help



When the diarrhea sufferer has run the gamut of home remedies without success, pleasant-tasting CREMOMYCIN can answer the call for help. It can be counted on to consolidate fluid stools, soothe intestinal inflammation, inhibit enteric pathogens, and detoxify putrefactive materials — usually within a few hours.

CREMOMYCIN combines the bacteriostatic agent succinylsulfathiazole and neomycin, with the adsorbent and protective demulcents, kaolin and pectin, for comprehensive control of diarrhea.

**INDICATIONS:** Diarrhea.

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**WARNINGS:** Use only after critical appraisal in patients with hepatic or renal damage, urinary obstruction, or blood dyscrasias. Fatal hypersensitivity reactions and blood dyscrasias reported with use of sulfonamides. Consider periodic blood counts, hepatic and renal function tests during intermittent or chronic use.

**PRECAUTIONS:** *Succinylsulfathiazole:* Use with caution if there is history of significant allergies and/or asthma. Continued use requires supplementary vitamins B<sub>1</sub> and K. *Neomycin:* Watch



# NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

June 1966

Dear Doctor:

The full-blown advent of Medicare is a scant 30 days away as last minute, sometimes frantic, preparations are made for the massive program. This second special report capsules late information and developments.

Plans for program implementation in Mississippi are on schedule, according to representatives of hospitals and carrier for Part 1-B medical services. State Board of Health is conducting hospital surveys for institutional participation as rapidly as possible.

Eligible hospitals - those certified by Social Security Administration - will be represented by Blue Cross as fiscal intermediary.

Claims for physicians' services - under Part 1-B - will be adjudicated by Travelers Insurance Company.

Only a handful of Mississippi hospitals are listed by HEW as having met conditions for participation under Part 1-A. None of these had fulfilled the requirement under Title VI of the Civil Rights Act of 1964 at press time. The present criterion is that hospitals fully accredited by the Joint Commission will be deemed as meeting conditions if Title VI compliance is met. Next gradient will be hospitals not accredited but which have no significant deficiencies. Third are hospitals with deficiencies which are being corrected, and last will be a provisional category.

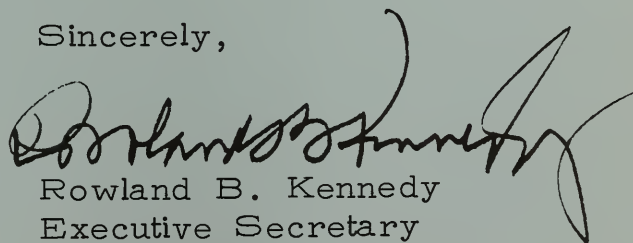
House of Delegates at 98th Annual Session acted to recommend to practicing physicians:

That they, the physicians, insofar as possible, deal directly with the patient, and

That the patient receive his Medicare benefits from the Part 1-B carrier by presentation of a receipted bill.

Physician's manuals on Part 1-B will be issued both by AMA and HEW. At the Chicago Annual Convention June 26-30, AMA will sponsor a conference on the new Part 1-B regulations.

Sincerely,

  
Rowland B. Kennedy  
Executive Secretary



## DATELINE - MEDICAL AMERICA

### SBH Begins Measles Vaccination Project

Jackson - Immunization against measles will be included in Mississippi's public health vaccination services, and the first installment of 35,000 doses of vaccine has been distributed to county health departments. SBH says that 200,000 doses of the live attenuated type of vaccine will be provided in Mississippi during 1966 through the Federal Vaccine Assistance Program. There are an estimated 275,000 measles-susceptible children in the preschool group.

### Dutch Cartel Jacked Up Quinine Prices

Washington - Hearings before the Senate Antitrust and Monopoly Subcommittee brought out evidence that a Dutch cartel purchased all but 1 million ounces of the 9.8 million ounces of quinine released from the U.S. stockpile. Evidence also showed that U.S. pharmaceutical firms were prevented from buying U.S.-owned quinine at the urging of the State Department who favored the Dutch purchaser. Prices have zoomed to \$2 per ounce from 20 cents in 1962. Senate subcommittee says it will refer evidence to Justice Department.

### Empire State ACS Arranges Homemaker Services

New York - The New York City Division of the American Cancer Society has established a homemaker service for cancer patients through arrangements with the Association for Homemaker Services. The ACS caseload is handled by a full time staff with physician and nurse supervision. Ability of the patient to pay is the basis for a graduated schedule of charges. Plan is closely coordinated with medical management of cases.

### PHS Makes Student Grants, Loan Funds Available

Washington - U.S. Public Health Service has made allotments of more than \$16 million under the Health Professions Students Loan and Scholarship programs to schools of medicine, dentistry, pharmacy, optometry, osteopathy, and podiatry. These initial grants included more than \$68,000 for loans and \$17,000 for scholarships to University of Mississippi School of Medicine. Under the law, students may receive up to \$2,500 in an academic year in either scholarship grants or loans.

### Minnesota Part 1-B Carrier Contract Is Altered

Minneapolis - The Social Security Administration has awarded a contract to Minnesota Blue Shield for 60 per cent of the state's Medicare-eligible population, raising the number of Blue Shield plan to 33 which will administer the program. Initially, the entire state had been awarded to the Travelers Insurance Co. which will administer the Mississippi Part 1-B program.





ORIGINAL PAPERS

# Management of Acute Abdominal Conditions in Infancy and Childhood

HUGH B. LYNN, M.D.

Rochester, Minnesota

IN DEALING WITH an acute abdominal condition, it is of paramount importance to be able to recognize the situation as an emergency and to expedite its handling. Only a small proportion of the abdominal problems encountered each day by the general practitioner are true emergencies. Unfortunately, it is this knowledge and the aversion to alarming parents unnecessarily that lead the overworked physician into the pitfalls of (1) changing the formula, (2) prescribing a sedative or antispasmodic, and (3) reassuring the parents, when what is really indicated is immediate hospitalization.

In the newborn period the most commonly encountered acute abdominal conditions include:

1. Omphalocele.
2. Diaphragmatic hernia.
3. Atresia or stenosis of the small bowel.
4. Incomplete rotation of the bowel, with duodenal bands.
5. Volvulus of the midgut.
6. Atresia or stenosis of the colon.

From the Section of Pediatric Surgery, Mayo Clinic and Mayo Foundation.

Read before the Section on Pediatrics, 97th Annual Session, Mississippi State Medical Association, Biloxi, May 10-13, 1965.

7. Atresia or stenosis of the rectum or anus.
8. Meconium ileus.
9. Aganglionic megacolon.
10. Rupture of the stomach—or another portion of the gastrointestinal tract.

---

*Acute abdominal conditions in infancy are almost all critical emergencies. The author urges prompt diagnosis and management. He reviews the most commonly encountered acute abdominal conditions in the newborn period, infancy and childhood and considers in detail the management of the acute conditions of the newborn.*

---

In infancy, the most common conditions include:

1. Incarcerated hernia.
2. Intussusception.
3. Meckel's diverticulum.
4. Duplications.
5. Tumors.
6. Trauma.
7. Torsion of cysts and ovaries.
8. Infection of cysts and sinuses.

## ACUTE ABDOMINAL / Lynn

In childhood, the most common conditions include:

1. Appendicitis.
2. Trauma.
3. Regional enteritis.
4. Chronic ulcerative colitis.
5. Meconium ileus equivalent.
6. Torsion of the testicle or ovary.
7. Primary peritonitis.
8. Tumors.

### ACUTE CONDITION DEFINED

What constitutes an acute abdominal condition?

To the parents it is:

1. Irritability and failure to nurse well.
2. Evidence of pain or discomfort.
3. Vomiting.
4. Intestinal bleeding.
5. Lack of bowel movements and distention.

To the physician it is:

1. Anything that might lead to perforation of the bowel and peritonitis.
2. Anything that might lead to aspiration, pneumonitis, and septic shock.
3. Anything that might lead to exsanguinating hemorrhage.
4. Anything else that might result in death or disability if untreated.
5. Any undiagnosed pathologic condition whether treatable or otherwise.

The usual clinical picture of a newborn with an acute abdominal condition includes:

1. Abdominal distention, which varies with the level of obstruction.
2. Vomiting or effortless regurgitation.
3. Irritability or listlessness.
4. Dehydration.
5. Pyrexia.
6. Oliguria.
7. Scantiness of stools to obstipation.

### EXAMINATION METHOD

An initial examination and routine questioning should readily reveal all the above-mentioned information. The rectal examination is as important as the examination of the heart, lungs, ears, and the like. This should be accomplished gently with the appropriate finger and a generous use of lubricant. Too vigorous or too rapid a dilatation of the anal orifice may confuse the picture by tearing

the mucosa and submucosa, producing bleeding and even inopportune vomiting, muscle guarding, and the like. Once the initial assessment has been made, the steps are often therapeutic as well as diagnostic:

1. Insertion of nasogastric tube (preferably radiopaque), irrigation to ensure its workability, and then taping to secure it in place. Oral feedings are automatically prohibited by this step.
2. Taking of x-ray views of abdomen and chest with patient supine and upright. If for any reason upright views cannot be taken, decubitus views are essential.
3. Intravenous cut-down and institution of parenteral fluid and electrolyte therapy.
4. Use of incubator (Isolette) with appropriate oxygen supply, humidity, and temperature, as well as suitable positioning without clothing.
5. Determination of hemoglobin, white blood count, and differential count.
6. Making blood available for transfusion.
7. Administration of vitamins K, C, and B complex, as desired.
8. Administration of antibiotics as indicated.

Once these procedures have been instituted, it may often be wise to observe the patient for a time with as little manipulation as possible. This will obviously vary with the diagnosis and circumstances.

In the newborn, the greatest concern is that the diagnosis is really adynamic ileus due to sepsis, birth trauma or other neurologic defect, or impending uremia. These conditions must all be eliminated as completely as possible by laboratory and diagnostic procedures, but it must always be remembered that the alternative diagnoses are pretty uniformly fatal without operation and that they all too often are fatal because of delayed operation.

It is impossible to cover the entire subject of abdominal emergencies, so I shall limit myself to consideration of the acute conditions of the newborn. No attempt is made to cover the technical aspects of the operation.

### OMPHALOCELE

This is the most readily detected of all the conditions and is obvious at the time of delivery. The drying out of the serous membrane progresses rapidly, leads to cracking, penetration by bacteria, rupture of the membrane, and peritonitis. The immediate application of sterile saline sponges or hexachlorophene (pHisoHex)-soaked sponges and the insertion of the nasogastric tube to delay intestinal distention are the major steps in preparation for immediate operation.



Even cases of ruptured omphalocele are not hopeless in this day and age, so immediate operation is indicated. The results in this entity are more closely related to the speed with which the infant is brought to surgery than to the experience of the surgeon or the thoroughness of work-up and preparation prior to operation.

Incomplete rotation of the bowel, abnormal mesentery of the small intestine, and duodenal bands are commonly associated with omphalocele.

### DIAPHRAGMATIC HERNIA

This is more difficult to detect. Unfortunately, nothing can be done until the difficulty is suspected. It usually requires several hours before respiratory distress, vomiting, and the like occur. While an intelligent examination of the unclothed infant may point the way, x-ray examination is the conclusive procedure. The presence of an opaque nasogastric tube *during* these studies may lend additional valuable information beyond the diagnosis of "a diaphragmatic hernia." Once the diagnosis is suspected, nasogastric suction is the single most valuable aid in preparing for immediate operation, since the distended bowel produces respiratory distress until the abdomen is opened and the herniated bowel reduced; and the same distended bowel presents problems in closing the abdomen.

Once the defect in the diaphragm has been repaired, I no longer make, or permit, any strenuous effort to expand the lung after reduction of the hernia. Closure of the diaphragmatic defect without drainage tubes is the rule. When the operation is completed, needle aspiration of the thorax may be performed and repeated once or twice during the next day or two if indicated. As the infant becomes more vigorous, the lung expands, the air in the pleural space is absorbed, and the mediastinum adjusts to the neutral position. This method of management has eliminated many of our most tragic complications, which were probably due to too rapid and too vigorous expansion of the collapsed lung tissue, as well as to overinflation of the opposite lung.

It must be emphasized that incomplete rotation, duodenal bands, and small bowel obstruction may occur in this condition and should be looked for.

### ATRESIA OF THE SMALL BOWEL

This gives relatively early symptoms. Duodenal atresia produces bile-stained vomitus within a few hours and should lead to diagnosis in the first 48 hours. These patients are in excellent condition

with little evidence of dehydration, electrolyte imbalance, and the like.

The symptoms of jejunal atresia are somewhat delayed but are similar to those of the higher obstructions.

Unfortunately, ileal atresia never seems to be detected until later when dehydration, distention, electrolyte imbalance, lethargy, and possibly aspiration pneumonitis are well established. The delay in diagnosis makes this one of the most difficult surgical conditions. In such cases the steps outlined in preparation for operation must all be adhered to. The urgency to operate before the bowel becomes necrotic and perforates, or before respiratory distress and vomiting produce a catastrophe, must be weighed against all the hazards of too rapid preparation. It must be pointed out that, in the presence of obstruction, overdistention, and failing circulation, the administration of electrolyte solutions in the usually acceptable amounts may be unrewarding. The resultant outpouring of fluid into the lumen of the obstructed gut and into the free peritoneal cavity may lead to dangerous delays if follow-up laboratory studies are waited for and further correction considered. Often a small transfusion prior to anesthesia is all that is indicated or wise. Once the abdomen is open, and the obstruction relieved, fluid balance may be pursued in the conventional manner.

### STENOSIS AND ATRESIA

Stenosis and atresia are considered together because they produce the same clinical picture if at different time intervals. Stenosis is incomplete obstruction, which becomes converted to complete obstruction or atresia through edema, blocking of the lumen by milk curds, compression or twisting due to distention of bowel with gas, or other causes. Other than the delay in onset or initial lack of severity of symptoms, there should be no difference in the management of the two entities.

Excision of the obstruction and suitable anastomosis constitute the procedure of choice. Shunting around complete obstructions is often wise, particularly in sites around vital structures, as in the second portion of the duodenum. Shunting around sites of incomplete obstruction is less rewarding since the intestinal stream tends to follow the normal course when edema subsides and curds are removed. The excision of intrinsic diaphragms is, in general, unsatisfactory and is usually avoided since the portion of the wall from which the diaphragm is excised remains as an abnormal rim of firm scar tissue that tends to contract and shrink down.

INCOMPLETE ROTATION OF  
THE BOWEL

This is merely one phase of developmental arrest of the intestines. Perhaps it is the later stage of the state encountered in omphalocele. The further complication of volvulus of the midgut is properly a part of this chain of events.

The symptoms due to incomplete rotation are usually intermittent vomiting, possibly epigastric distention, and gagging. Irritability and hunger may be present. The recurrent episodes are probably due to variations in compression of the duodenum by tension from the peritoneal folds extending across the duodenum to the colon. The colon not only is abnormally placed and unusually mobile but may sag and produce excessive traction when filled with gas or feces.

X-ray studies of the large bowel may indicate the diagnosis by showing the cecum high on the right side or actually in the epigastrium. Studies of the duodenum by x-ray techniques may vary from examination to examination, and the reports must be evaluated in relation to the clinical picture.

## VOLVULUS OF THE MIDGUT

This is infinitely more of an emergency than is duodenal obstruction. As a part of this complicated embryologic entity, it must be recognized that the mesentery of the entire midgut is abnormal. Instead of the widely attached mesenteric apron reaching from high in the midline down to the right lower quadrant, there is a short mesenteric attachment in the region of the origin of the superior mesenteric artery which then fans out to supply blood vessels to all the midgut. This unsatisfactory anatomy leads to a pedunculated state, which not only makes twisting easy but produces ischemia with minimal torsion of the stalk.

Recognition of this intra-abdominal catastrophe is often difficult and too often suspected but discarded in favor of some less urgent or some nonoperative condition. While correction of the volvulus is a simple matter, the prevention of recurrence has been a much greater problem. Although many procedures have been advocated, it appears that the adhesions produced as a result of the first severe episode, operation, and manipulation probably do more to prevent recurrence than any ingenious operative maneuver yet devised.

This is rare; the problem is that of ileal obstruction in most cases. Preoperatively the diagnosis can be made quite accurately by x-ray studies made with the aid of barium enemas, in conjunction with the taking of plain roentgenograms of the abdomen with the patient in decubitus and upright positions. Curiously enough, in our small series of colonic atresias, two patients have shown amazing distention of the cecum and ascending colon with practically no evidence of ileal distention.

Pinpoint diagnosis of such a lesion is of little significance and really of only academic interest. The diagnosis of a surgical condition of the abdomen is actually all that is required.

## ABNORMALITIES OF THE ANUS

These vary from mildly troublesome stenosis to the imperforate stages with which everyone is more or less familiar, and to the type IV situation wherein the atresia is really rectal in location rather than perineal or anal. Although gentle and regular dilatation is sufficient for the stenoses, all other forms require early operation. Of late I have been attempting to attack all cases of imperforate anus of both types II and III by the perineal route. While this is not recommended for the occasional surgeon unacquainted with the problem of rectourinary and rectovaginal fistulas, I must say that the results have been gratifying and suggest that this approach is more likely than other approaches to maintain the puborectalis sling in its normal relation to the rectosigmoid.

Type IV imperforate anus is the most difficult type with which to deal. The diagnosis of obstruction is usually made rather late, and unless care is taken the true diagnosis is missed and the condition of the patient is relatively poor at the time of operation. It is my intention to consider doing the Duhamel operation on the next patient of this type if it appears feasible.

## MECONIUM ILEUS

This is the severe intestinal manifestation of mucoviscidosis or cystic fibrosis of the pancreas. Although it occurs in only 5 to 10 per cent of such cases, it poses an emergency. Relief of the obstruction produced by the thick, inspissated meconium in the terminal ileum is obviously necessary before overdistention, ischemia, and perforation of the bowel wall take place. Over the years, extensive resection, ileostomy of various sorts, and some terrifying manipulations to



evacuate this thick putty-like substance have been advocated. More recently the use of acetylcysteine has produced dramatic resolution of this substance in a few minutes. Although surgical treatment is and will remain necessary because of the possibility of atresia or stenosis associated with the meconium ileus, simple instillation of this mucolytic agent after examination of the entire gut produces almost immediate relief.

### AGANGLIONIC MEGACOLON

Obviously this, like any of the subjects under consideration, merits a whole lecture in itself. The urgency of this condition lies in the fact that it is too infrequently considered. The distention, respiratory impingement, and vomiting may lead to aspiration pneumonitis. The strenuous manipulations employed in an attempt to get results from enemas may make matters worse, lead to mechanical perforation of the rectum, produce water intoxication unless saline solution is used, and in general greatly delay treatment. Prolonged partial obstruction leads to enterocolitis, which in itself can be most devastating. The safest procedure in most circumstances is early sigmoid colostomy just above the level of the obstructing aganglionic site.

In our last case of aganglionosis presenting in a newborn, we were able to tide the patient over the first six weeks of life with close supervision of an intelligent mother and the use of protein hydrolysate (Nutramigen) formula. The patient underwent a Duhamel operation at this time with surprisingly little difficulty and appears quite normal at present. The diagnosis had been established in the treatment room by submucosal biopsy and confirmed later at operation by biopsy of the muscular layer. Although this management cannot be recommended for the occasional sur-

geon or for general use, it is gratifying to see an infant with aganglionic megacolon who has all his surgery behind him at this age.

### RUPTURE OF THE STOMACH

This is rare. The etiology is usually obscure and the diagnosis is made only after the situation is obviously critical. The absence of obvious free air in the peritoneal cavity on initial x-ray examination is all too common to exclude this clinical diagnosis. Repeat x-ray examination with the patient in the decubital position will often present an entirely different picture. All the supportive measures are indicated, but immediate operation to relieve the distention and respiratory embarrassment and to close the opening, which is sometimes extensive, is the primary therapeutic measure. Delay while seeking to improve the patient's general status is futile and can only lead to further deterioration.

### SUMMARY

Acute abdominal conditions in infancy are almost all critical emergencies. Orderly preparation and management of the situation are essential; however, delays in management are unforgivable. Delays in diagnosis are unfortunate and often unavoidable but generally lead to earlier detection of the next case, whereas delays in treatment, especially to wait for laboratory reports, are too commonly considered good preoperative preparation. Preparation of the patient clinically is infinitely more satisfactory than preparation by laboratory computations.

Once a diagnosis is made, the patient should be intensively and correctly treated for that diagnosis. While a mistaken diagnosis is understandable, mistreating that suspected entity is never acceptable.

★★★

The Mayo Clinic

---

### MARK ONE FOR CLEOPATRA

"There," said the psychiatrist with obvious relief, "it's taken us a long time, Mrs. Jones, but I believe that you are cured of the fixation that you are Elizabeth Taylor."

"Oh, thank you, doctor," was the reply. "Just send your bill to Richard."

—Don Adams in *Parade*

# Radiologic Seminar L:

## An Unusual Cause for Pneumoperitoneum

DAN T. KEEL, JR., M.D.  
Brookhaven, Mississippi

IN X-RAY EXAMINATION of the acute abdomen, pneumoperitoneum or "free air" in the peritoneal cavity is a common finding. This finding, with rare exception, indicates perforation of the intestinal tract and usually precipitates immediate surgical exploration of the abdomen to find and close the abnormal opening.

In the current case report, C. W., a 53-year-old white male tile setter, was admitted to King's Daughters Hospital, Brookhaven, Miss., for the second time on Feb. 20, 1966, complaining of severe abdominal pain of two days' duration. He had experienced less severe abdominal pain for one week which had been poorly localized in the lower abdomen.

Past history revealed long-standing alcoholism and ascites. Pertinent physical findings on admission included temperature, 102; pulse, 90; BP, 140/90. The skin was slightly icteric. Heart and lungs were normal. The abdomen was distended with diminished bowel sounds, and a fluid wave was present. There was diffuse tenderness but not rigidity. X-ray of the chest and abdomen revealed extensive "free air" in the peritoneal cavity. Exploration revealed a large tear in the cecum with extensive fecal contamination and peritonitis. A cecostomy was done and multiple drains were inserted. Further exploration was not carried out because of the patient's condition. Despite intensive postoperative antibiotic, fluid and supportive therapy, the patient expired on the third hospital day.

An autopsy revealed perforated diverticulitis with abscess formation producing complete obstruction of the sigmoid colon with secondary perforation of the cecum and peritonitis. Laennec's cirrhosis was confirmed.

The radiographic examination of the acute abdomen should include as a minimum recumbent and upright films of the abdomen and an upright PA chest film. The patient should sit in the upright position for at least 15 minutes prior to x-ray



Figure 1. Upright chest film showing massive pneumoperitoneum.

Sponsored by the Mississippi Radiological Society.



examination to allow any air present to gravitate into the subdiaphragmatic position, and the upright films should be obtained first. Chest films demonstrate small pneumoperitoneum much better than the abdominal films and give information about the heart and lungs vital to the anesthetist if immediate surgery is necessary. It also excludes chest disease as a cause of abdominal symptoms. If the patient is unable to sit upright, then he should lie on his left side for 15 minutes and a right lateral decubitus film should be obtained instead of the upright abdomen film.

Perforation of the colon secondary to obstruction produces less than 2 per cent of all cases of "free air" in the peritoneal cavity. The mechanism for producing perforation requires mechanical obstruction of the colon and a competent ileocecal valve so that a closed system is created within the colon. Gas can be admitted through the ileocecal valve but cannot reflux back into the small bowel so that progressive colon distention is produced. The cecum represents the weakest point in the distended bowel, and this is the point where rupture usually occurs as it did in our case. The excessive pressure in the bowel produces extensive peritoneal contamination following perforation.

Table I lists the causes of pneumoperitoneum. It should be noted that 90 per cent of instances of "free air" in the peritoneal cavity are due to perforated peptic ulcer. Conversely only 75 per cent of perforated ulcers show "free air" so that absence of demonstrable pneumoperitoneum does not exclude perforated ulcer. It is commonly mis-

conceived that ruptured appendix and ruptured diverticulitis of the colon are common causes of

TABLE I  
CAUSES OF PNEUMOPERITONEUM—Bockus<sup>1</sup>

1. Perforated peptic ulcer—90 per cent
2. Abdominal surgery
3. Ruptured appendix
4. Rupture of duodenal, small bowel, or colon diverticula
5. Ruptured cyst or <i>solitary ulcer</i> of colon or small bowel
*6. Perforation 2nd to intestinal obstruction
7. Perforation due to vascular occlusion
8. Ruptured megacolon
9. Free perforation of enterocolitis
10. Traumatic rupture of stomach or bowel
11. Iatrogenic due to endoscopy
12. Ruptured cysts in <i>Pneumatosis Cystoides Intestinalis</i>
13. Ruptured stomach in newborn
14. Unknown—incidental finding

\* (As in our case.)

pneumoperitoneum when actually these two causes combined produce less than 2 per cent of all cases of "free air." ★★★

Route 2, Box 303-M

(I wish to thank Drs. J. J. Breeland and Jack A. Atkinson for the use of their clinical material.)

## REFERENCE

1. Bockus, Henry L.: *Gastroenterology*, ed. 2, Philadelphia, W. B. Saunders Company, 1963.

## POST MORTEM PLEASURE

At a hospital benefit, the staff presented the melodrama, *Ten Nights in a Barroom*. A particularly voluptuous nurse stole the show in the death bed scene.

At the after-theatre party, an intern approached the curvy actress and said, "Aren't you the one who 'died' in the play?"

"Why, yes," said the nurse, "why do you ask?"

"I've come to claim the body," was the reply.

# Clinicopathological Conference LXXVII

Conducted by the Department of Pathology  
Field Memorial Hospital  
Centreville, Mississippi

*Dr. S. E. Field, Jr.:* "This is a case of a 37-year-old colored female who was admitted to the Field Memorial Community Hospital for the first time on Dec. 6, 1965. Her primary complaint was that of pain and swelling of her leg; and in spite of all attempted therapy, she died on her seventh hospital day. The case presentation will be by Dr. S. E. Field, Sr."

*Dr. S. E. Field, Sr.:* "Our CPC for today is somewhat unusual in that the primary problem is not so much in diagnosis as it is in management. We feel, however, that a thorough discussion of the case will be beneficial to all clinical practitioners."

"This 37-year-old colored female had enjoyed good health all of her life until approximately four weeks prior to her admission to the Field Memorial Community Hospital. At that time the patient felt a nagging pain in the calf of her right leg and noticed that this area was swollen and rather tender. For approximately one week the patient continued to work at a job which required walking, and the pain and swelling continued."

"On Nov. 17, 1965, the patient was examined by her local physician who felt that the most probable diagnosis was a 'hematoma, calf of leg.' There was no history of trauma. The patient denied previous similar episodes. She was started on an oral enzyme by mouth, local heat, and bed rest at home."

"On Nov. 30, 1965, the patient was again seen by her local physician who noticed that while the symptoms were slightly improved, the calf of the right leg was still extremely tense but was nontender. A Homan's sign was absent, and the patient had no clinical evidence of varicosities. There was no pretibial or foot edema. Because of the slight symptomatic improvement, the patient was again sent home on local heat and bed rest."

"On Dec. 6, 1965, the patient, unable to work because of pain on walking, was again seen by her local physician. She now had one plus pitting pretibial edema and was admitted to the hospital for further evaluation and possible more vigorous therapy. She gave no history of a recent pregnancy. The patient had been obese for many years but had not noticed a sudden change in weight. The remainder of the patient's past history was unremarkable."

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*This month's CPC concerns a 37-year-old colored female who was admitted with a primary complaint of pain and swelling of her leg. In spite of all attempted therapy, she died on her seventh hospital day. Discussers are the late Drs. S. E. Field, Sr., Walter Colbert, R. J. Field, Jr., John Gibson, Richard Nunnally, and S. E. Field, Jr.*

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"Physical examination on the day of admission revealed a well-developed, tremendously obese, colored female in no acute distress. Her blood pressure was 120/80. Her pulse was 76 per minute. Her respirations were 20 per minute, and her temperature was 99 degrees Fahrenheit. Aside from her tremendous obesity, the significant physical findings were limited to the right lower extremity. The right thigh appeared slightly larger than the left. The measured circumference was 67 cm. on the right and 63 cm. on the left at a comparable level."

"There was moderate tenderness to palpation along the medial and lateral aspects of the right thigh. There was no tenderness in the femoral area of the groin. There was no tenderness or swelling of the right knee. There was a one plus pitting pretibial edema on the right but no foot



edema. The right calf area was tense, although not shiny, and was nontender. Homan's sign was absent. All pulses were palpable, and there was no gross deformity of any extremity. There was neither evidence of venous congestion nor dilatation nor increased heat. No varicosities were found. Clinical impression at the time of admission was acute thrombophlebitis and possible deep venous thrombosis of the right lower extremity.

### LABORATORY FINDINGS

"A CBC and urinalysis were obtained on the day of admission. The patient had a hematocrit of 38 per cent with a hemoglobin of 12.3 gm. per cent. Her white blood count was 7,250 with a differential count of 56 seg. min. cells, 6 stab cells, 4 eosinophils, and 37 lymphocytes. The platelets were judged adequate. A Lee-White clotting time was 10 minutes. The urinalysis on a voided specimen showed slightly cloudy yellow urine with an acid reaction. The urine specific gravity was 1.022. There were 16 to 20 white blood cells per hpf. and 8-10 epithelial cells per hpf. Many bacteria were seen. The urine, albumin, and sugar determinations were negative.

### CLINICAL COURSE

"On the day of admission the patient was started on high doses of Aqueous Heparin injected subcutaneously. On her second hospital day, there was essentially no change clinically, and the patient's Lee-White clotting time was 26 minutes. A phlebogram was performed the following morning. Comment on the available x-rays will be made by Dr. Walter Colbert in just a moment. On the fourth hospital day, the patient showed more edema of the entire right lower extremity, and it was decided that an ileofemoral venous exploration was warranted. Her clotting time was 25 min. On the morning of the seventh hospital day, the patient was taken to surgery, and an exploration of her right common femoral vein was begun under endotracheal anesthesia. Approximately 30 minutes after the procedure had begun, the patient had a cardiac arrest and expired despite attempted resuscitation."

### X-RAY FINDINGS

*Dr. Walter Colbert:* "A chest x-ray on this patient on Dec. 7, 1965, was within gross limits of normal. A venogram on Dec. 9, 1965, demonstrated excellent visualization of the superficial system of the medial side of the right leg, with no apparent filling of the deep system. The examination was performed with a tourniquet in place

above the ankle, and ordinarily, satisfactory filling of the deep system would have been accomplished. From the views at hand, it can be rather definitely surmised that the deep circulation of the leg, and almost certainly the thigh, was obstructed."

### CASE DISCUSSION

*Dr. R. J. Field, Jr.:* "This case today presents a problem not so much of differential diagnosis but the more awesome problem of cause and effect in management of venous thrombosis. Since Virchow's presentation of his theory of the cause of venous thrombosis in 1846, this perplexing phenomenon has confronted us. Actually it was Van Swieten in 1752 who first noted the presence of clots in blood vessels during pregnancy and mentioned the gravity of the situation. Yet in spite of intensive efforts, we still have not been able to improve upon Virchow's original hypothesis. The damage to the vessel wall, increased coagulability of the blood and stasis to the venous circulation are the basic mechanisms involved in venous thrombus formation. Indeed lack of progress in this grave occurrence led DeBakey to say, 'Few conditions in medicine have been subjected to so much analysis with so little elucidation.'

"In this particular case, we find a relatively young woman with apparently a spontaneous onset of venous thrombosis in her right lower extremity. There is no history of trauma, and the only etiological agents are those of obesity and the fact that she daily worked on a concrete floor. Thus I believe the combination of these two factors to be the basic cause of her venous thrombosis. Apparently at the onset of her leg edema, it was considered that she might have a hematoma of the muscles of the calf of the right leg due to unknown trauma or to blood dyscrasias. Our laboratory work-up ruled out the blood dyscrasias, and although the possibility of trauma cannot be definitely ruled out, it seems to be a rather remote possibility.

### VENOUS THROMBOSIS

"The statistics on venous thrombosis are depressing in that it is estimated that there are 47,000 deaths each year in the United States as a consequence of this vascular catastrophe. One hospital in Philadelphia reported recently that pulmonary embolism was more frequent than either pneumonia or bronchogenic carcinoma in their institution. This disease is encountered in all age groups; however, the majority are middle aged or older. It is the most common cause of postop-

erative deaths and is even more common in medical patients, particularly those with known heart disease. Fortunately, pulmonary embolism does not occur in every case of venous thrombosis; it is present in about 50 to 60 per cent. In most cases the lower extremities are the beginning points of venous thrombosis, but it can occur in many other locations such as the pelvic veins. To add further to our difficulties, many cases do not give any clinical signs of venous thrombosis whatsoever until they suddenly succumb to massive pulmonary embolism.

"This patient apparently developed a venous thrombosis in the veins of her right calf which in spite of conservative management continued to propagate into her thigh. I would assume that surgery was decided upon because of failure of anticoagulation and ascension of the edema and pain of her right leg. Undoubtedly this patient died as a result of a massive pulmonary embolism which took place during the operative procedure. The phlebograms of this patient which have been described by Dr. Colbert demonstrate very well

a complete block of the deep veins of the lower right extremity. We have found that phlebography is a good diagnostic tool when there is doubt as to the origin of the pulmonary embolus. We would like to hear from Dr. John Gibson about the electrocardiographic tracings taken during this surgical procedure prior to her death."

#### EKG FINDINGS

*Dr. John Gibson:* "I have here only Lead I. I understand that this Lead was run as a monitoring tracing after thoracotomy had been performed and spontaneous ventricular contraction re-established. Apparently, no other cardiograms are available. This Lead definitely shows an abnormal tracing, and the changes are compatible with right bundle branch block. Of course an unequivocal diagnosis cannot be made without evaluating a complete 12 Lead EKG. On this tracing, there is a sinus rhythm with a rate of about 64; the Q.R.S. complex is prolonged, measuring .12 seconds. There is a broad S Wave which measures .08 seconds; the S-T Segment is elevated, and the T Wave is upright. These changes are consistent with a right bundle branch block.



Figure 1



Figure 2



"To confirm this diagnosis, however, I would like to see the precordial leads showing a notched R Wave in  $V_1$  and  $V_2$  with a delay in downstroke, the so-called 'late intrinsicoid deflection.' But, in this case we do not have the precordial leads for confirmation. Right bundle branch block occurs as a transient finding in massive pulmonary embolus. This is a result of severe overloading of the right ventricle which can block or delay the passage of the impulse along the right branch of the bundle of His. I must add that these changes can also occur in acute myocardial infarction."

## OPERATIVE FINDINGS

*Dr. S. E. Field, Jr.:* "The right common femoral vein and its tributaries were exposed without difficulty, and proximal and distal control was obtained with vascular tourniquets. The vein was greyish in color and indurated. A  $1\frac{1}{2}$  cm. longitudinal incision was then made in the anterior wall of the common femoral vein; immediately several black gelatinous clots were extruded. There was no appreciable proximal or distal bleeding.

"An exploration and thrombectomy of the ileofemoral venous system was then done by the usual techniques. Since the patient was under general anesthesia and unable to use Valsalva voluntarily, gentle to firm pressure was used over the lower abdominal cavity, and a small amount of black gelatinous clot was again expressed through the venotomy. An open end catheter was then inserted into the iliac vein and the lower inferior vena cava, and strong suction was applied. For the first time brisk bleeding occurred from the ileofemoral side as the catheter was withdrawn. The vascular tourniquet was then used to occlude the common femoral vein superior to the venotomy. At this time the anesthetist noticed a drop in blood pressure to 70 mm. of mercury systolic. Although there had been no great blood loss, 500 cc's of whole blood was immediately started. The blood pressure gradually rose over several minutes to 100 mm. of mercury systolic.

## FEMORAL EXPLORATION

"An exploration of the superficial and deep femoral systems was then begun. Once again using the catheter and suction, a large amount of black, gelatinous, clotted blood and organizing thrombus was aspirated from the deep and superficial femoral venous systems. As the venous system of the extremity was being cleared, the anesthetist reported that there was no obtainable pulse or blood pressure and that the patient's respirations had ceased. A quick palpation of the patient's exposed

right femoral artery revealed no pulsation. A 30 second closed chest massage was instituted without response. An emergency left anterolateral thoracotomy was done quickly through the fourth intercostal space. At the time the chest was opened, the heart was dilated and in stand-still. The pericardium was opened, and manual massage was begun. The left ventricle immediately responded with excellent tone and strong contraction. The right ventricle remained in complete stand-still and was flabby and dilated.

"In spite of all therapeutic measures, this situation persisted; finally in desperation a pulmonary arteriotomy was done, and two large thrombi were easily removed. The pulmonary embolectomy was done with technical difficulty because of poor exposure but with minimum blood loss. The pulmonary arteriotomy was provisionally closed and further attempt was made at resuscitation without success; the patient expired."

## PATHOLOGY

*Dr. Richard Nunnally:* "The specimen submitted for examination in this case consists of three irregular pieces of friable grey-brown material, the largest measuring 7 by 1.1 by 1 centimeter in greatest dimensions. Their representative sections of each specimen was submitted for microscopic examination, and this revealed recent antimortum thrombi characterized by homogenous framework of adherent platelets and fibrin containing scattered layers of clusters of leukocytes. Interspersed throughout irregular pools of erythrocytes. There is no evidence of organization even at the periphery of the clot. Our microscopic diagnosis is recent antimortum thromboembolus."

## FINAL COMMENTS

*Dr. S. E. Field, Jr.:* "In looking back on the clinical course of this patient, it occurs to me that our phlebogram was somewhat incomplete. Our primary interest at the time that the phlebogram was done was in making a diagnosis of deep venous thrombosis. It would have been to our great advantage, and possibly life-saving for the patient, had we included in the phlebogram a film of the pelvis and the bifurcation of the inferior vena cava. By this method it is possible to demonstrate a clot in this high iliac vein or lower inferior vena cava in a large per cent of these cases.

"Naturally, with a clot in this area, ligation or at least proximal control of the inferior vena cava prior to manipulation of the clot should be strongly considered. The next opportunity came at the time of common femoral venotomy. Once again ligation or proximal control of the inferior vena

cava at this point could have been life saving. It is possible that having seized upon neither of these chances, salvage may still have been possible had pulmonary embolectomy been attempted at the first episode of shock—thus avoiding the disastrous effects of right ventricular dilatation.

“As Dr. R. J. Field, Jr. has commented, acute pulmonary thromboembolism for well over a century has been a study in frustration for the physician. As we have seen from this case, the diagnosis of venous thrombosis and pulmonary thromboembolism is frequently questionable. In addition, not only is the etiology of venous thrombosis unknown, but the true incidence is in doubt, and the methods of treatment are highly argumentative. Needless to say, at the completion of this operative procedure we felt the need to investigate and re-evaluate the current trend in management of the acute pulmonary embolism. I refer here only to the acute pulmonary embolism, the course of which is decided within a short time.

“There is probably no one here today who has not witnessed the sudden death due to an acute pulmonary thromboembolism of the ‘healthy’ patient of whom we expected a long and productive life. As we have all seen, this occurs not only in the operating theater but on the ward as well. There are uncertainties in conservative as in sur-

gical management of this disease, but in extremis the only hope lies in operation.

“Vossschulte, Stiller, and Eisenreich have recently reported that in 1963 they attempted seven emergency pulmonary embolectomies. Of these seven, four patients were discharged without cerebral damage. These were done without the aid of extracorporeal circulation. Their approach is trans-sternal, giving quick and ideal exposure for anterior pulmonary arteriotomy. The dangerous dilatation of the right ventricle is immediately relieved by clamping of the inferior and superior vena cava. The embolectomy is then performed with the suction, and the vessel wall provisionally closed. Cardiac venous return is then gradually restored. A ligation of the inferior vena cava should then be done, of course, just above its bifurcation.

“Gentlemen, the achievements of pulmonary embolectomy are underestimated. It can be accomplished with limited requirements for apparatus in any modern department of general surgery. Surgery in cases of acute pulmonary embolism depends on a simple surgical method. This demand is met by trans-sternal embolectomy. It should be remembered that pulmonary embolus is a complication met by the general surgeon and not only by specialists in thoracic and cardiac surgery.”

★★★

Field Memorial Hospital

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## CANINE CASUALTY

Working late one evening, the husband of the house came in very hungry. Finding nothing to eat except a box of dog biscuits, he tried one and found it delicious. From that day on, he ate a box of dog biscuits every day.

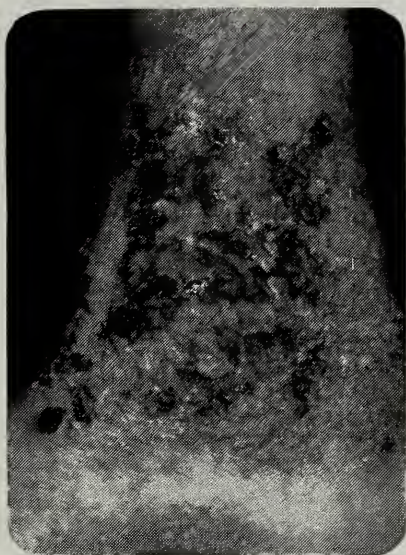
Curious about case lot purchases of dog biscuits, the grocer asked the wife of the house how many dogs she owned. She admitted that they were for her husband.

“But those are for dogs,” exclaimed the grocer. “If your husband keeps eating them, he’ll wind up in the hospital.”

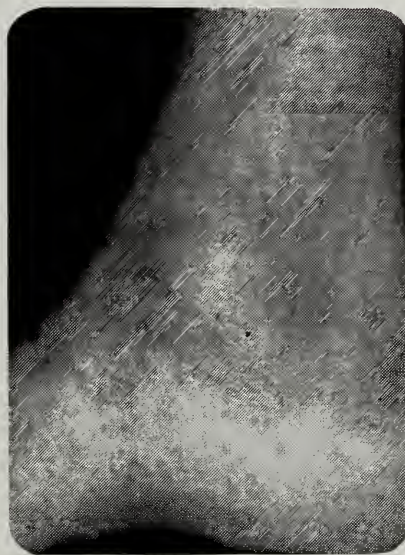
“He’s there now,” she said sadly, “but not from ill effects of the biscuits. He was hit chasing a car.”



# eczema: scourge of childhood



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**Precautions and Side Effects:** Do not use in the eyes or in the ear (if drum is perforated). A few individuals react unfavorably under certain conditions. If side effects are encountered, the drug should be discontinued and appropriate

measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyoderma will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

**Packages:** Tubes of 5 Gm. and 15 Gm.; ½ lb. jar.

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The importance of vagal stimulation of gastric hyperacidity and hypermotility makes such measurements particularly important in evaluating the parasympatholytic effect of drugs used in patients with peptic ulcer, gastritis, biliary dyskinesia and other gastrointestinal disorders.

Pro-Banthine has been shown<sup>1</sup> to produce complete gastric motor inactivity with doses of 6 to 8 mg. intravenously. Comparison tests were made with the belladonna fraction, atropine. Measured usual dosage unit versus usual dosage unit, Pro-Banthine was more than four times as effective as the belladonna alkaloid.

**Indications:** Peptic ulcer, functional hypermotility, irritable colon, pylorospasm and biliary dyskinesia.

**Oral Dosage:** Adequate dosage should be given for optimal results. For most *adult* patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthine (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type ampuls of 30 mg.

**Side Effects and Contraindications:** Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action may occur. Pro-Banthine is contraindicated in patients with glaucoma, severe cardiac disease and prostatic hypertrophy.

1. Barowsky, H.; Greene, L., and Paulo, D.: Cinegastroscopic Observations on the Effect of Anticholinergic and Related Drugs on Gastric and Pyloric Motor Activity, *Amer. J. Dig. Dis.* 10:506-513 (June) 1965.

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See for

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# Ectopic Pregnancy: A Ten Year Survey

CALVIN T. HULL, M.D., and MICHAEL NEWTON, M.D.  
Jackson, Mississippi

ECTOPIC PREGNANCY is an obstetrical emergency which remains important for several reasons. First, a delay in diagnosis may result in fatal hemorrhage. Thus, 7 of 302 maternal deaths occurring in Mississippi during the years 1957 through 1963 were found by the Committee on Maternal and Child Care of the Mississippi State Medical Association to be due to hemorrhage from ectopic pregnancy. Second, the urgent nature of the condition acts as a constant stimulus to the maintenance of adequate hospital facilities and particularly of blood banks. Third, an ectopic pregnancy represents a serious threat to the reproductive potential of the individual and on this account the type of operative treatment and follow-up are especially important.

The present study reviews our experiences with ectopic pregnancy at the University Hospital in Jackson, Miss. from its opening on July 1, 1955, through June 30, 1965.

## MATERIALS

All charts coded out as ectopic pregnancy were reviewed. One hundred eighty-eight cases were found of which 173 or 93 per cent were service patients and the remainder private. During the same period 17,855 deliveries occurred on the obstetrical service of the hospital, giving an incidence of 1 ectopic pregnancy to 95 deliveries. No correlation was found between the occurrence of ectopic pregnancy and the month or season of the year. The average gravidity of the patients was 4.1 and the average parity 3.1. The average age was 28.4 with a range of 18 to 50 years. The age and incidence closely parallels that found by other authors. However, the parity is higher than that given by Malkasian.<sup>1</sup> The oldest patient was of interest.

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From the Department of Obstetrics and Gynecology, University of Mississippi School of Medicine.

## OLDEST PATIENT

A. J. was 50 years old, gravida 13, para 13. She was admitted to the medical service in April 1964 for study of ascites which was thought possibly to be due to an intra-abdominal malignant lesion. She had been amenorrheic for three months. During the workup, she was found to be anemic. Culdocentesis produced bloody fluid. A small fetal skeleton was seen on x-ray, and a pregnancy test was positive. She was transferred to

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*Ectopic pregnancies occurring at the University Medical Center during the 10 year period from July 1, 1955, through June 30, 1965, are reviewed. The signs and symptoms, laboratory data, operative findings and complications are included. The importance of culdocentesis is emphasized and interesting cases are cited.*

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the obstetrical service and a laparotomy performed with a diagnosis of ectopic pregnancy. A 5 month fetus was present in the right lower abdomen, and the placenta was implanted on the left over the descending colon and kidney. The fetus was removed and the placenta left intact. Two months later the patient had intestinal obstruction and underwent another operation. She was found to have an abscess in the area of the placental site. The area was debrided and drained. Since then the patient has done well.

## SYMPTOMS

Information concerning the patients' history and physical findings was taken from the resident's notes. Attempts to establish the gestational age of the pregnancy were usually unsuccessful

## ECTOPIC PREGNANCY / Hull *et al.*

due to difficulty in establishing exact menstrual dates. One hundred and eighty-one patients (96 per cent) complained of some type of menstrual irregularity, either amenorrhea or irregular vaginal bleeding or both. Table 1 shows the most common complaints. These symptoms are in line with those given by other authors.<sup>1-7</sup>

TABLE 1

### ECTOPIC PREGNANCY 1955-1965 COMMON COMPLAINTS IN 188 PATIENTS

Abdominal pain . . . . .	185	(98%)
Irregular vaginal bleeding . . . . .	136	(72%)
Nausea and/or vomiting . . . . .	85	(45%)
Shoulder pain . . . . .	33	(18%)

It is interesting to note that 10 patients had already had one ectopic pregnancy, and two had had a tubal ligation. It has been stated by Word<sup>6</sup> that a previous ectopic pregnancy increases by 10 times the chance of another ectopic gestation. Twenty-nine (15 per cent) gave a history of a previous abdominal operation.

### SIGNS

The physical findings were usually those of peritoneal irritation and included rigidity, direct and rebound tenderness, distention and decreased or absent bowel sounds. Tenderness was usually noted on pelvic examination, and an adnexal mass was felt in 90 cases (48 per cent). The size of the uterus was usually stated to be difficult to determine because of the tenderness and distention.

### LABORATORY DATA

Culdocentesis was performed in 173 cases (92 per cent). Our usual technique of culdocentesis is to place the patient in the lithotomy position. A speculum is inserted, and the vagina is cleansed with aqueous Zephiran. The posterior lip of the cervix is grasped with a single tooth tenaculum. The culdesac is then aspirated, using a sterile 10 cc. syringe and a long 18 or 20 gauge needle. Culdocentesis is considered positive when either nonclotting or clotting blood or flecks of old clot are obtained. It is considered negative if no material or only clear fluid is obtained. This procedure is similar to that described by Word.<sup>3, 6, 7</sup> The results of the culdocenteses are shown in Table 2.

Table 3 shows the laboratory data obtained on admission. The occasional high hemoglobin in the

face of sudden considerable hemorrhage is best explained on the basis that hemodilution has not yet occurred.

TABLE 2

### ECTOPIC PREGNANCY 1955-1965 RESULT OF CULDOCENTESIS

Number of culdocenteses . . . . .	173	
Number positive . . . . .	163	(94%)
Number negative . . . . .	10	(6%)

### OPERATIVE FINDINGS

Operation was performed in all patients. Blood was started as soon as possible after admission and when indicated. General anesthesia was used in all cases and is the anesthesia of choice in patients who may be in shock. Vertical abdominal incisions were used in the majority of cases (86 per cent), and one ectopic pregnancy was removed through a posterior colpotomy.

The ectopic gestation was found on the right side in 106 cases (57 per cent) and on the left in 79 cases (42 per cent). Table 4 gives the portions of the tube in which the pregnancies occurred. The trend toward distal tubal ectopic sites was also found by Word,<sup>7</sup> Malkasian<sup>1</sup> and Fielding.<sup>5</sup> An example of recurrent ectopic pregnancy is as follows:

T. M., a 37-year-old woman, gravida 9, para 8, with a history of a previous ectopic pregnancy was seen in November 1963. She was in shock and culdocentesis was positive. At operation she was found to have a ruptured ectopic pregnancy in the distal third of her left tube. The middle third of the same tube was absent as a result of the previous operation. Figure 1 shows a drawing of the operative findings in this case.

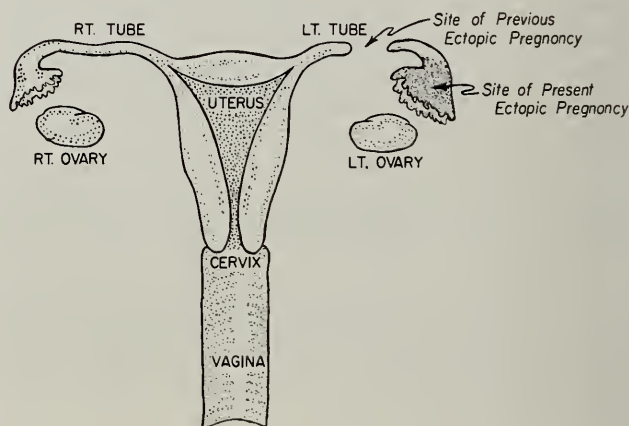


Figure 1



In another case the ectopic pregnancy was found in the cornual stump of a tube which had been previously removed for an ectopic pregnancy. Salpingectomy alone, either partial or complete, was performed in 119 cases and salpingo-oophorectomy in 62. Cornual resection was also performed in 50 cases. Tubal repair or tuboplasty was not performed in this series. Appendectomy was done at the time of operation in 18 patients. There was no apparent increase in morbidity as a result of this. As much of the blood was removed from the abdomen as possible, and the abdomen was thoroughly irrigated with warm saline before closing. The average estimated blood loss including that found in the abdomen plus the surgical loss was 1,336 cc. and the average blood replacement was 1,328 cc. Only 17 patients required no transfusion.

POSTOPERATIVE CARE

The average hospital stay was 6.9 days. Temperature elevations of 100 degrees or higher were noted in 144 patients postoperatively, and the average number of days of fever was 2.3. Antibacterials and antibiotics were used in 144 patients.

TABLE 3  
ECTOPIC PREGNANCY 1955-1965  
BLOOD COUNT ON ADMISSION

	Mean	Range
Hemoglobin (gms) . . . . .	10.3	5.4-13.9
Hematocrit (%) . . . . .	30.7	18-42
White blood count . . . . .	13,159	4,500-34,800

Postoperative complications were few and are listed in Table 5. The one death gives a mortality rate of .53 per cent. This is slightly less than reported by Douglas,<sup>2</sup> Collins<sup>4</sup> and Word.<sup>6</sup>

J. H. was a 27-year-old, gravida 2, para 1, who was seen in July 1958 with a acute surgical abdomen and a positive culdocentesis. She had been amenorrheic for 4 to 4½ months. At the time of operation she was found to have a 3½ month size fetus in the culdesac with 2,000 cc. fresh and old blood in the abdomen. The fetus was removed and control of bleeding at the culdesac implantation site was difficult. Following operation intraperitoneal bleeding recurred, and the abdomen had to be reopened later the same day. Bleeding was again temporarily controlled. However, the intraperitoneal hemorrhage continued, and the pa-

tient expired the next day in spite of every type of treatment. At postmortem, the patient was also found to have bilateral active pulmonary tuberculosis.

No comment can be made concerning the incidence of subsequent pregnancies because most of our patients returned to their local physicians following their postoperative clinic checkup. However, 33 are known to have subsequently become pregnant.

TABLE 4  
ECTOPIC PREGNANCY 1955-1965  
SITE OF ECTOPIC PREGNANCY

Distal third of tube . . . . .	67	(36%)
Middle third of tube . . . . .	45	(24%)
Proximal third of tube . . . . .	19	(11%)
Cornual portion of tube . . . . .	15	( 8%)
Tubovarian . . . . .	5	( 3%)
Abdominal . . . . .	3	( 2%)
Site unstated . . . . .	31	(16%)

COMMENT

A retrospective study of charts such as this suffers from a number of disadvantages. Among these are the facts that the records are never as good as one would have hoped, and also that the number of cases is limited to those specifically diagnosed at operation. Other cases of ectopic pregnancy which resolved spontaneously may have been missed. However, this review does illustrate several points in management. First, no case is typical: history and even physical signs may be misleading. Second, culdocentesis is confirmed as being an important diagnostic aid and one which can easily be performed. Third, operative intervention is urgent. Blood should be started, but one should not wait until the loss is replaced—this may never happen. Lastly, adequate removal of the tube with cornual resection and preservation of the ovary where possible is appropriate treatment. Excess blood should be removed and ap-

TABLE 5  
ECTOPIC PREGNANCY 1955-1965  
POSTOPERATIVE COMPLICATIONS

Aspiration pneumonitis . . . . .	5
Wound hematoma or abscess . . . . .	5
Transfusion reaction . . . . .	3
Thrombophlebitis . . . . .	2
Pulmonary embolus . . . . .	1
Ruptured spleen . . . . .	1
Uncontrolled hemorrhage and death . . . . .	1

pendectomy may be performed if the patient's condition is satisfactory.

### SUMMARY

1. One hundred eighty-eight cases of ectopic pregnancy treated at the University of Mississippi Hospital over a 10 year period from July 1, 1955, through June 30, 1965, have been reviewed.

2. Interesting cases have been described and the management of this condition has been discussed. ★★★

2500 North State St.

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4. Collins, C. G.; Beacham, W., and Beacham, D.: Ectopic Pregnancy, Tr. Am. A. Ob-Gyn and Abd. Surgery 59:141, 1948.
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### A.M. ECONOMICS

The physician's telephone rang at 4 a.m., and a woman's voice asked, "How much do you charge for a house call at this hour, doctor?"

"Ten dollars," was the sleepy reply.

"Then, how much for an office visit?"

"Five dollars when I see a patient at the office," he said.

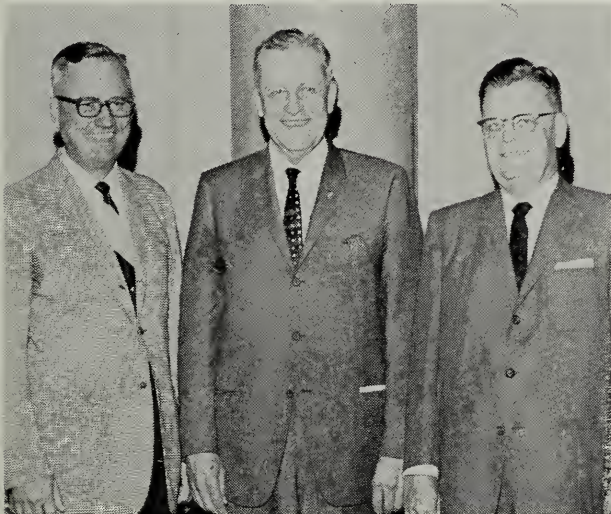
"Fine," was the cheerful response, "I'll meet you at your office in half an hour."





# Dr. Thompson Inaugurated President; Dr. Ainsworth Named President-elect

Dr. Temple Ainsworth of Jackson was named president-elect of the Mississippi State Medical Association by acclamation during closing ceremonies of the 98th Annual Session. Inaugurated as 1966-67 president was Dr. James T. Thompson of Moss Point. A near-record attendance of 1,027 had been tallied.



*Three years of the MSMA presidency are represented by Drs. Everett Crawford, 1965-66, James T. Thompson, 1966-67, and Temple Ainsworth who is the newly named president-elect.*

Dr. Everett Crawford of Tylertown, 1965-66 president, told the House of Delegates that they possessed a near-priceless intangible in association membership as he outlined many of MSMA's services in his annual address. He said that the value of association membership is "to be measured in terms of professional attainment, medical service, postgraduate education, and the projecting of our voices as the majority among us directs."

Pointing out that he disliked measuring the value of association membership in terms of dollars and cents, Dr. Crawford said that such a measurement could be made in that the association had saved every member more than he pays in

all dues in lowering professional liability insurance premiums since 1961.

At opening sessions on May 9, Dr. James Z. Appel of Lancaster, Pa., president of the American Medical Association, reaffirmed AMA's historic stand against government interference in medical care, saying that AMA still thinks that Medicare is unnecessary, unwise, and unfair.

He added that American physicians, however, will contribute whatever they can to make the program shape up in the best interests of patients and their continuing to receive the best possible medical care. He said that nearly 100 AMA members are serving on technical and advisory committees in the development of the program.

Named to the posts of vice president were Drs. Arthur E. Brown of Columbus for the northern area, George E. Gillespie of Jackson for the mid-state area, and Leo O. Stewart of Pascagoula for the southern area.

Three members of the Board of Trustees were renamed to full terms. They are Drs. W. E. Moak



*Dr. and Mrs. Everett Crawford honored the president and first lady of the AMA at a reception at the Country Club of Jackson. Dr. and Mrs. James Z. Appel of Lancaster, Pa., right, receive with Dr. and Mrs. Crawford.*

## 98th ANNUAL SESSION / Continued

of Richton, G. Swink Hicks of Natchez, and C. D. Taylor, Jr., of Pass Christian.

Drs. Howard A. Nelson of Greenwood, speaker of the House of Delegates, and William E. Lottrehos of Jackson, the House vice speaker, presided over sessions of the association's policy-making body.

Other top officials elected or re-elected were Dr. W. M. Dabney of Crystal Springs, editor; Dr. George H. Martin of Vicksburg, associate editor; Dr. Howard A. Nelson of Greenwood, delegate to AMA for the term 1967-68; and Dr. Stanley A. Hill of Corinth, alternate delegate to AMA for 1967-68.

Major issues before the House of Delegates included Blue Shield, billing methods for Medicare patients, association dues, annual session schedules, and amendments to the constitution and by-laws.

A year-long study on Blue Shield was considered and action on a resolution introduced in 1965 came up on establishing a separate Blue Shield plan under association sponsorship. The House voted, on recommendation of the Board of Trustees, to take no action on the resolution and wait a year on developments in the joint Blue Cross-Blue Shield plan under new management.

A resolution from the Coast Counties Medical Society, also seeking a separate Blue Shield plan, was not adopted.

The House did vote that "the Board of Trustees be requested to use the methods that are necessary to achieve a more equitable distribution of benefit monies under the plan" and that it work with the Blue Cross-Blue Shield organization for the objectives outlined in the report.

Among these objectives was one seeking more realistic Blue Shield fees.

The House asked that physicians who care for patients under Medicare deal directly with the patient insofar as possible and that patients receive their Medicare benefits from the carrier by presentation of a receipted bill.

In other actions, the House of Delegates:

—Scheduled the 99th Annual Session for Biloxi during May 15-18, 1967, and set convention schedules, alternating between Jackson and the Gulf Coast, through 1970.

—Approved a new format in scheduling which eliminated conflicts between reference committee hearings and the formal program of the scientific assembly.

—Raised state medical association dues \$10 effective with 1967 dues.

—Deleted from the constitution and by-laws

the degree of scientific membership, thereby requiring that all members be active, Emeritus, or associate.

—Abolished the Committees on Cancer Control, Diseases of the Heart, Aging, and Federal Medical Services as constitutional bodies of the Council on Medical Service with the understanding that their functions would be continued by the council or by *ad hoc* committees.

—Reorganized the Council on Scientific Assembly to provide that section secretaries are elected for three year terms, thereby providing for continuity in annual session planning.

—Urged that more than one physician serve on the newly created Interagency Commission on Mental Illness and Mental Retardation, a coordinating group representing state agencies working in the new program.

—Commended Dr. Michael Newton for his outstanding service as chairman of the Committee on Maternal and Child Care.

—Reaffirmed a 1964 policy statement on teaching programs in charity hospitals, asking that liaison between the University of Mississippi School of Medicine and the association be established in this connection.

—Recommended that the State Board of Health offer home health services only in counties where no such services are sponsored by private organizations.

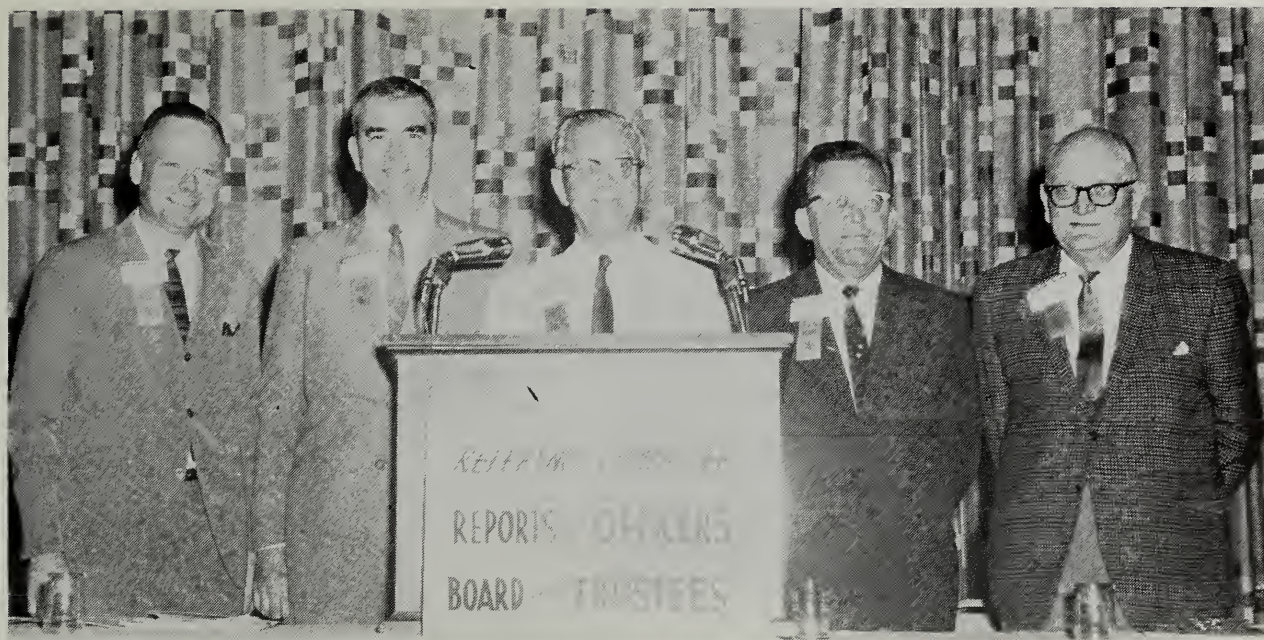
—Asked that the legislature provide for medical representation and advice in any implementation of Title XIX of Medicare, the new comprehensive extension of Kerr-Mills for those found needy.

—Requested that pathologists bill separately for their services apart from technical costs aspects by hospitals and reaffirmed that pathology

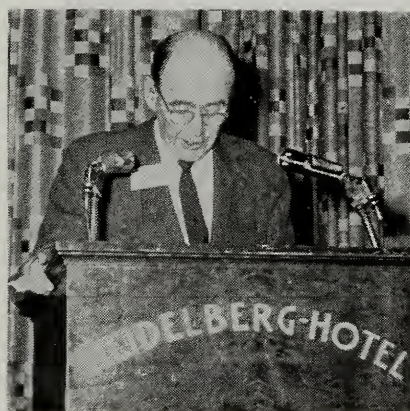


The scientific exhibit was popular. Here, from the left, Drs. Stanley A. Hill of Corinth, Frank Yates of Memphis, R. L. Wyatt of Holly Springs, and H. M. Wadsworth of Hernando, view one of the many presentations.

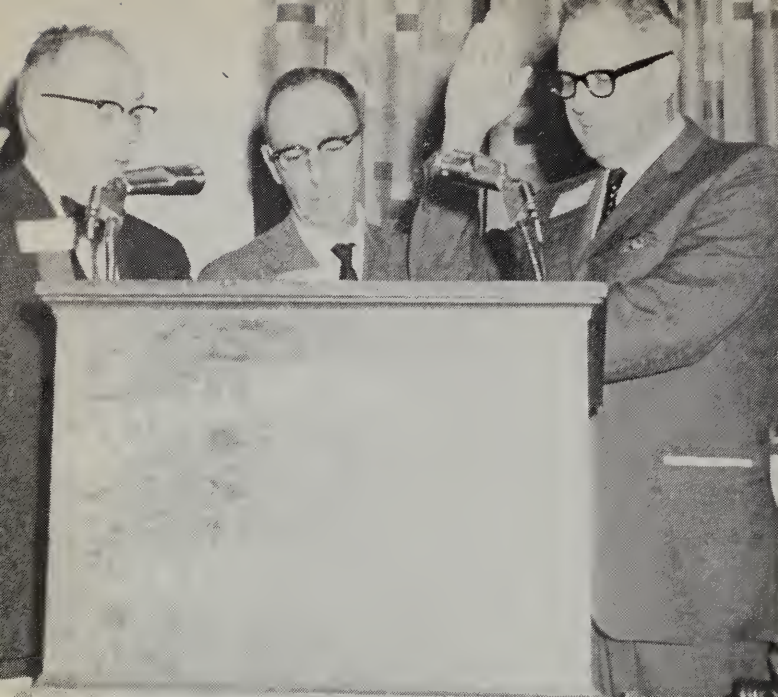




It was a busy House of Delegates with presidential addresses and reference committee hearings. Top, the Reference Committee on Reports of Officers and Board of Trustees, from the left, Drs. R. J. Field, Jr., Spencer Barnes, Chairman Lawrence W. Long, Victor E. Landry, and John F. Lucas. Center, Dr. Crawford addresses the House to be followed, bottom, by AMA President Appel.







Board of Trustees Chairman John B. Howell, Jr., administers the oath of office to Dr. Thompson as Executive Secretary Rowland B. Kennedy holds the association's official Bible. Center, a happy Dr. James D. Hardy of UMC receives the Aesculapius Award and a \$200 honorarium from Dr. James L. Royals for the most outstanding scientific exhibit. Bottom left, Tennessee alumni are Drs. Crawford, Dean M. K. Callison. Thompson, and S. Jay McDuffie, UT medical alumni president. Bottom right, Dr. J. T. Davis receives the 1966 MSMA-Robins Award from President Crawford.







Auxiliary officers are, from the left, Mrs. J. Gordon Dees, Mrs. J. Hurd Gaddy, Mrs. David L. Clippinger, Mrs. Warren C. Jones, Mrs. Paul B. Brumby, and Mrs. David B. Wilson. Center right, Mrs. Gaddy addresses the House of Delegates, followed by, lower right, Mrs. Dees. Bottom left, Board Chairman Howell makes a point with his Memphis brother-in-law, Dr. Frank Yates.





## 98th ANNUAL SESSION / Continued

is the practice of medicine in all relevant senses.

—Gave the annual membership effort a boost by asking the new vice presidents to assume leadership in their respective areas in the work of membership.

—Opposed the raising of AMA dues to \$70 per year and requested the AMA delegates to vote against it.

Members elected to councils were Dr. George D. Purvis of Jackson, Budget and Finance; Dr. Dennis E. Ward of Corinth, Medical Education; and Dr. E. LeRoy Wilkins of Clarksdale, Constitution and By-Laws.

Named to the Council on Legislation were Drs. A. T. Tatum of Petal, A. V. Beacham of Magnolia, and Eldon L. Bolton of Biloxi. Judicial Council posts went to Drs. Paul B. Brumby of Lexington, William B. Wiener of Jackson, and Omar Simmons of Newton.

Those elected to terms on the Council on Medical Service included Drs. George F. Archer of Greenville, James O. Gilmore of Oxford, and Jack M. Senter of Belmont.

Four nominees to the board of directors of the Mississippi Hospital and Medical Service were Drs. Walter H. Simmons of Jackson, S. H. McDonnieal, Jr., of Jackson, Andrew K. Martinolich of Bay St. Louis, and Lamar Arrington of Meridian.

Fraternal delegates named were Dr. Jo N. Robinson of Columbus, to Alabama; Dr. G. Lacey

Biles of Sumner, to Arkansas; Dr. Victor E. Landry, to Louisiana; and Dr. Richard F. Riley of Meridian, to Tennessee.

The formal program of the Scientific Assembly, comprised of eight general sessions, was chaired by Dr. James L. Royals of Jackson. A highlight was the May 11 Symposium on Nuclear Medicine co-sponsored with the association by the U. S. Atomic Energy Commission.

## New Section Officers Are Named for 1967

New officers for the association's seven scientific sections were elected by their respective memberships during the 98th Annual Session at Jackson. Named to head the Section on Obstetrics and Gynecology were Drs. Chester H. Lake of Jackson, chairman, and John E. Lindley of Meridian, secretary.

Drs. George E. Gillespie of Jackson will serve as chairman of the Section on Surgery with Dr. Raymond S. Martin of Jackson as secretary.

The Section on Medicine named Drs. William E. Weems of Laurel as chairman and Dr. William C. Kellum of Tupelo as secretary.

Heading the Section on General Practice will be Dr. Paul B. Brumby of Lexington, and Dr. C. R. Jenkins of Laurel will be secretary.

Drs. Shelby W. Mitchell of Ellisville and R. L. Wyatt of Holly Springs will respectively serve as

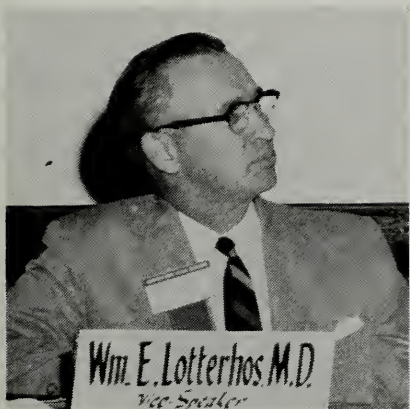
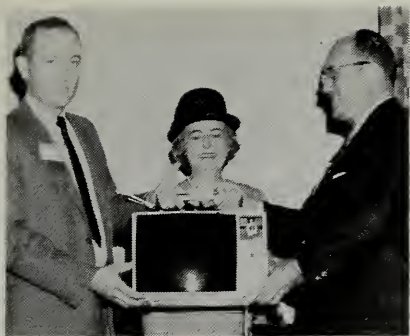


*Ole Miss medical alumni leaders confer as Dr. W. E. Caldwell, left, 1965-66 president, hands the gavel to 1966-67 president T. E. Wilson. Right, new*



*Section on General Practice officers are Drs. C. R. Jenkins, secretary, left, and Paul B. Brumby, chairman, right.*





Clockwise from top left, Dr. Lawrence S. Moffatt won the TV; Mr. J. B. Williams of Parke, Davis presented Dr. Royals with four paintings for the MSMA building; Dr. Thompson receives the President's Pin from Dr. Crawford; House Speaker Howard A. Nelson is registered by Miss Martha Burford; and Vice Speaker W. E. Lotterhos listens to reports as he presides.



## 98th ANNUAL SESSION / Continued

chairman and secretary of the Section on Preventive Medicine.

The Section on Pediatrics chose Dr. J. Lee Owen of Jackson as chairman and Dr. Charles P. Sharp of Tupelo as secretary.

Dr. Seth H. Barron of Columbia will serve as chairman of the Section on Eye, Ear, Nose, and Throat, and Dr. Emmett M. Herring, Jr., of Hattiesburg will be secretary.

Under the 1965-66 Constitution and By-Laws of the association, the seven section chairmen and the constitutional secretary-treasurer make up the Council on Scientific Assembly with the latter as the constitutional designee as chairman.

Dr. James L. Royals of Jackson, the council chairman, said that he plans an early summer meeting to begin planning and organization of the 99th Annual Session which will be conducted at Biloxi May 15-18, 1967.

## Auxiliary Names Officers at 43rd Session

Mrs. David L. Clippinger of Hazlehurst was named president-elect of the Woman's Auxiliary to the Mississippi State Medical Association as the 43rd Annual Session of the ladies' organization was conducted at Jackson on May 10.

Mrs. J. Gordon Dees of Jackson was installed as 1966-67 president. Mrs. J. Hurd Gaddy of Long Beach presided over the session which was highlighted by annual reports and an appearance by Mrs. C. C. Long of Ozark, Ark., first vice president of the AMA Auxiliary.

Mrs. Long conducted the officers' installation ceremony. The session was conducted at the Hotel Heidelberg which was also scene of the annual luncheon conducted on May 11.

A formal tea honoring the ladies was held at Mississippi's historic executive mansion with the first lady of the state, Mrs. Paul B. Johnson, in attendance. Mrs. Lawrence W. Long of Jackson was chairman of arrangements for the tea.

Following custom, the Auxiliary named the 1965-66 president, Mrs. Gaddy, as first vice president. Other officers are Mrs. T. E. Ross, III, of Hattiesburg, second vice president; Mrs. Paul B. Brumby of Lexington, third vice president; Mrs. H. H. McClanahan, Jr., of Columbus, fourth vice president; Mrs. W. C. Jones of Forest, recording secretary; Mrs. Ralph Sneed of Jackson, corresponding secretary; Mrs. David B. Wilson of Jackson, treasurer; Mrs. Stanley A. Hill of Corinth,

parliamentarian; and Mrs. T. A. Baines of Jackson, historian.

## Mrs. Dees Is State 'Mother of the Year'

Mrs. J. Gordon Dees of Jackson, newly installed president of the Woman's Auxiliary to the Mississippi State Medical Association, has been named Mississippi Mother of the Year. The honor competition is sponsored annually by the American Mothers Committee.

Informed of her selection just prior to the 98th Annual Session when she was scheduled to be inaugurated as Auxiliary president, Mrs. Dees said that she "didn't have time to go to New York" for the national competition. She did, however, ably represent the state at the national event.

Mrs. Dees is active in civic, cultural, and church affairs in Jackson.

## Home Health Plan Is Set by SBH

Eighteen county health departments are in the process of developing and expanding skilled nursing and other therapeutic services in order to qualify for certification as home health agencies in the Health Insurance Program for the aged when it becomes effective on July 1.

As necessary personnel become available, Dr. A. L. Gray, State Health Officer, said that other county health departments will apply for certification in order to provide as soon as possible state-wide services in conformance with statutory requirements of the Social Security Act.

The counties that are presently gearing up for Medicare home services are: Attala, Claiborne, Coahoma, DeSoto, Forrest, Grenada, Harrison, Humphreys, Jackson, Lauderdale, Monroe, Neshobo, Noxubee, Pike, Washington, Winston, Yazobusha and Yazoo.

These local health departments are the only agencies set up in Mississippi with the present capability for certification as providers of home health services.

However, Dr. Gray pointed out that under the law, other agencies—such as a department of a hospital, medical school, medical clinic or a subdivision of a local or state welfare department—are eligible to qualify as providers.

To receive home health services, patients must be under private physician care with written orders that are renewed every two months.



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# The President Speaking

## 'A Resource of Reassurance'

JAMES T. THOMPSON, M.D.

Moss Point, Mississippi

AMERICAN MEDICINE IS WATCHING with interest to learn who their 300,000th colleague will be. As the JOURNAL points out editorially this month, a young American will unwittingly gain this distinction.

Much has been written and said about the supply of physicians in the nation and in Mississippi over the years. In just over a decade and a half, we have seen membership in our association grow from 855 to more than 1,400. In the same period, the total number of physicians in the state has zoomed to about 1,800. Two factors, both initiated by Mississippians, have contributed to this happy phenomenon.

First, the State Medical Education Board program, under which a Mississippi student might receive up to \$5,000 in state funds for his medical education, was a key factor in training more than 600 physicians. The program was well timed, served its purpose, and its discontinuation by the 1966 Regular Session of the Legislature had the blessing and approval of our state medical association.

The second, and logically successive factor, is the University of Mississippi School of Medicine. This young, viable institution has already earned a posture of respect in the American medical community, and it is keeping pace with the needs and aspirations of the state in the training of physicians.

Not only are Mississippi physicians far more plentiful than they were in 1946 but they are also distributed more optimally for the most effective service. And they are younger, too. In 1950, 38 per cent of our doctors—four out of 10—were over age 60. Today, six out of 10 are under age 50, and four out of 10 are under age 40.

Considered in the context of their splendid scientific training and growing numbers, the supply of physicians in Mississippi is a resource of reassurance to all citizens.

★★★





## Milestone 300,000: Medical Progress and Doctors for All

### I

WITHOUT THE FAINTEST SUSPICION or intention of occupying a place in history, a young man or woman will step forward this month to receive the diploma of doctor of medicine and become the 300,000th living physician in the United States. It will be a milestone occasion, both for this young American and for the American people, because it will document the success of the medical profession and the nation's medical schools in assuring an ample supply of physicians.

In 1960, there were about a quarter of a million M.D.'s in the United States. In a little over half a decade, their numbers have grown 20 per cent while the total population increased less than 10 per cent. But the growth of medical service potential is geometric rather than arithmetic, because every year, every physician can render more service to more patients as the fund of knowledge, the chemotherapeutic armamentarium, surgical technics, and other skills progress.

By 1975 when the population will be about 230 million, the number of physicians shall have grown almost 50 per cent over the 1960 level. All of which, incidentally, makes very bad statisticians or out-and-out prevaricators of the prophets of gloom, doom, and physician shortages. It never was true and patently could not be true today.

### II

In 1958, a clever, glib writer named Richard Carter wrote a book entitled *The Doctor Business*. While it was primarily a total assault upon the American Medical Association, author Carter managed, over the course of 275 pages, to damn just about everything medicine is or could be, even in his dream world of social justice. Said Richard Carter:

"There are not enough physicians in the United States. Every day American lives are ruined or lost because of the shortage. There are not enough general physicians to assure prompt, unstinting family service. There are not enough specialists to attend to the more complicated problems of diagnosis and treatment. There are not enough research physicians to conduct the studies so urgently needed in man's war against premature disability and death. There are not enough teaching physicians to staff our medical schools. There are not enough public health officers. Furthermore, there are not enough clinics, laboratories, and public health programs. We do not have enough medical schools. Therefore we do not get enough new doctors."

In 1965, a Rhode Island newspaperman named Selig Greenberg became spiritual successor to Carter. Greenberg's *magnum opus* is entitled *The Troubled Calling, Crisis in the Medical Establish-*

ment. In this much longer, tenuous, muck-raking treatise, Greenberg makes American medicine appear about as un-American as the executive committee of the Politburo. He harangues the doctor shortage over 40 pages with some of the most improbable statistics and impossible projections which a variety of sources are said to provide.

As with Carter, newsman Greenberg is a great disciple of physician-population ratios. Both make extensive use of these statistical snake pits to "prove" that the United States is a most medically neglected nation.

Greenberg says that the 1965 ratio of practicing physicians to population was 1:1,100 and that by 1975, it may have deteriorated to 1:1,500. What Greenberg didn't know about medical education in the United States is almost as abysmal as his inability to grasp fundamental distribution economics.

### III

Between 1930 and 1947, World War II understandably influencing the picture, only one new medical school was opened in the United States. It was in this era that the popular myth of controlled production of new physicians got started. There will be another Carter or Greenberg flogging this dead horse in 1975 when the number of M.D. graduates shall have increased to 10,000 annually from the 1930 level of 4,700.

In 1965, there were 88 accredited medical schools, and by 1970—a scant four years away—there will be 13 new schools in operation, raising the total to 101. Six more new medical schools are virtually assured by 1975 and another six may then be either in operation or at near-operational readiness. About 25 other medical school projects are on the drawing boards.

Medical student enrollment has jumped from the prewar 21,000 level in 77 schools to just under 35,000 today. There has been a 400 per cent increase in faculties teaching these students in 15 years, and the Association of American Medical Colleges believes that medical faculties will double from the present 15,600 to more than 31,000 by 1975.

All of this has come about because the medical profession, their formal organization, and the schools themselves are doing something positive and realistic to assure that there will always be a sufficient supply of medical manpower, Carter, Greenberg, and other miscellaneous prophets of unattended sickness and death notwithstanding.

The ratio bit is a tricky stunt, really one of the better myths. Since durability is usually a characteristic of a myth, it has been around for quite a while and will probably continue to pop up here and there.

Any honest statistician or economist knows that something-to-population ratios must be severely construed and thoughtfully applied. Per capita income is a good example as is the stunt of pointing out that half of the people in the United States have incomes of less than \$1,000 per year. Overlooked, of course, are wives and children who have no incomes, yet live comfortably in a wholesome, healthy environment provided by a husband-father who does have the income.

Strictly speaking, physician-to-population ratio within the continental land mass doesn't always mean what it says. It overlooks population mobility, readily accessible transportation and communications, and the obvious fact that medical care is a distributable service. Medical care crosses political subdivision boundaries, so it just doesn't hold water to say that county A or state X has enough physicians, while adjacent county B or state Y does not. The populations of these political subdivisions are not static.

If this were not true, then there ought to be a lot of hungry doctors at Rochester, Minnesota.

Where the physician-population ratio does mean something in real terms is in a circumstance of geographic isolation, say the island of Guam. But if this occurs to medicine's gadflies, they conveniently omit any mention of it.

### V

American medicine has not only built more medical schools but it has opened their doors as



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well to those who might not otherwise enter. Through 1965, the American Medical Association Education and Research Foundation had made more than 27,500 loans to deserving medical students, interns, and residents in the amount of \$32 million. In the fourth year of the program, which is supported entirely by voluntary gifts, mostly from physicians and Auxiliary members, about 685 new loans per month were being made, and the volume is going up.

The critics again notwithstanding, physicians and their professional organizations are doing everything possible to assist and encourage new medical schools. AMA's Council on Medical Education expends tens of thousands of physician-paid dues dollars each year advising, counseling, guiding, and helping both established schools and those in the formative stages.

American physicians are giving over \$5 million each year to the schools in hard cash and much more in voluntary services in teaching, research, and professional services in school clinics.

The whole of the health service industry gives employment to 4 million Americans, the third largest occupational field in the nation, exceeded only by agriculture and construction.

There is not a shortage of physicians or medical services, and every day, the possibility of such an eventuality becomes less and less. There is a concomitant increase in the service capacity of each physician as the forward thrust of medical progress accelerates. There are pockets of dislocation and transitory maldistributions, of course, but considered in the full context of the American medical service picture, they are not and will not be problems of significant magnitude. The United States is a healthy, well-doctored nation, and it is getting healthier every day.

The 300,000th physician will see to that.—R.B.K.

## The Public CPC: Affront to Good Taste

There's a big flap in Great Britain over a medical story in a London newspaper. It is not without substance, either, because the physician who attended the late Sir Winston Churchill is author of a series of articles replete with clinical detail and documentation of the great statesman's terminal illness and death. The Churchill family has protested to no avail.

Nor is the appetite for such grisly narration unique to our English cousins, because we do the same thing in the United States. Volumes have been written about the assassinations and deaths of Presidents Lincoln, Garfield, and McKinley. More recently, even the *Journal of the American Medical Association* published the autopsy report on President Kennedy. Scarcely a newspaper in the nation missed pinpointing the exact location of the bullet wounds in Malcolm X.

It's pretty obvious that the subject of this sensationalism need not be a head of government or state; almost anybody in the public eye will do nicely.

If this practice contributed to the fund of scientific knowledge and were published only in responsible medical journals, there might be justification for it. But among physicians, just the opposite is usually true. What really contributes to their learning is the essay about the patient mercifully described within the bounds of professional propriety as "a 56 year old female who was first admitted. . . ." The personal identity of the patient who died can't always add to the scientific value of the clinicopathological conference.

About the only excuse for public examination of the circumstances of an identified death—aside from the proper concern of a court of law—is for the purposes of the professional historian. If, after



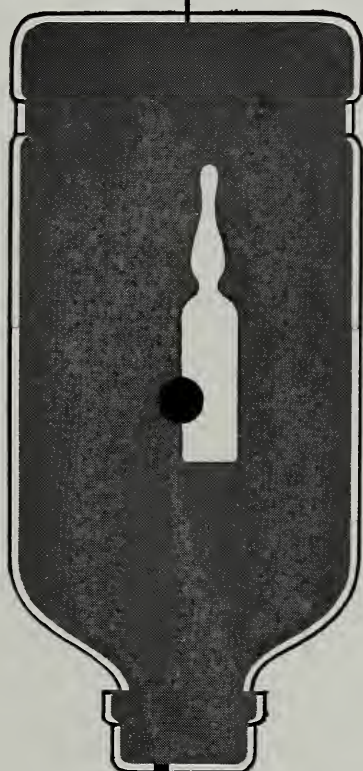
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"Oh, well, one of the studies was bound to come up a dud."



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PROVIDES  
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AMPUL OF



Obstetrical or post—surgical patients requiring a dependable increase in hemoglobin will receive as much iron (250 mg. in a 5 cc. ampul) as in one pint of blood. Imferon (iron dextran injection) is less expensive and it avoids the well-recognized hazards of whole blood transfusion. When patients cannot—or cannot be relied upon to—take oral iron, Imferon (iron dextran injection) will rapidly supply needed iron for reserve stores.

## IMFERON® (iron dextran injection)

**IN BRIEF: ACTION AND USES:** A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

**COMPOSITION:** Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

**ADMINISTRATION AND DOSAGE:** Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

**SIDE EFFECTS:** Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

**PRECAUTIONS:** If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

**CONTRAINDICATIONS:** Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only it is contraindicated in other anemias.

**CARCINOGENICITY POTENTIAL:** Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

**SUPPLIED:** 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

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the span of a century, he finds it pertinent to serious academic pursuit to make such an examination, then this is justified. Nobody is suggesting that medical science be needlessly circumscribed by Victorian restraints, but the character of medicine can only cry out against these affronts to good taste.—R.B.K.

## The Hart of the Matter

As the 2nd Session of the 89th Congress enters its final weeks, Sen. Philip A. Hart (D., Mich.) vows and declares that he will hold hearings on S. 2568 before his Senate Subcommittee on Antitrust and Monopoly. The bill is aimed solely at physicians, forbidding them to realize any "profit" on the dispensing of devices or drugs. In reality, its chief target is the ophthalmologist who supplies his patient with glasses as part of his total professional service.

The position of the association on S. 2568 has been stated in frank terms (The Hart Bill: A Myopic View of Medical Practice, J.M.S.M.A. VII:69-72 (Feb.) 1966). As this odious legislative brew begins to bubble, a few additional pertinent observations on the bill are very much in order.

Maybe the senator needs a little legal advice, because his approach to his objectives is obscure and irrational. If he considers dispensing wrong, why does he not seek to make it *illegal* rather than merely to forbid "making a profit?" Of course, if "profit" is his first and only concern, then the senator's obvious goal is to curtail the now legitimate income of a specific, selected profession. Some lawyers suggest that this would make an interesting constitutional question.

Second, the Hart bill more than likely invades the jurisdiction of state medical licensure boards. Of course, its enactment would hardly be a first in invading state prerogatives, but it raises another valid point. Many states actually license physicians to dispense glasses, while other states may, in some manner, tend to restrict the practice. In any event, this is a concern for state jurisdiction and not a function which should be superseded by federal statute.

Third, the bill singles out physicians, points an accusing finger at them, and pre-judges *all* physicians—nobody else is mentioned in the law—by establishing them as the culprits who restrain trade to the harm of patients. This is as absurd as it is illogical and wrong.

Moreover, no mention is made of dentists,

osteopaths, or even chiropractors who may be peddling food fads and quack devices. No mention is made of the sale of dentures or oral prostheses, and they are not for free.

Fourth, both the courts and some state tax laws have held the dispensing of eyeglasses to be a part of a professional service. Some sales tax laws hold the glasses to be incidental to the service rendered. Why, then, could it not be properly argued that interference with the dispensing of glasses is in truth interference with the rendering of a professional service?

Since S. 2568 would also affect the dispensing of contact lenses and since some ophthalmologists who do not dispense conventional glasses do furnish and fit contact lenses, just how does this inconsistency wash? It doesn't.

Fifth, as the JOURNAL pointed out last February, the Hart bill constitutes a limitation upon the practice of medicine under the guise of antitrust legislation. A logical extension of the illogical bill would then be to say that medicine is a utility. The fact that a given medical service may be competitively purchased shouldn't bother Sen. Hart's tortured logic in the slightest.

Sixth and finally, the senator doesn't define what he means by "profit" and for his purposes, it's just as well he doesn't. Profit, say the economists, is intended to be that which is realized over cost. And what is "cost" in the practice of medicine? No answer in the Hart bill, so don't waste time looking.

This is the Hart of the matter. If the subcommittee reports this preposterous legislation favorably, the full Senate Judiciary Committee, the parent body, must find answers to these questions.—R.B.K.

## Hands and Vertebrae Across the Sea

A Greenville chiropractor has garnered high honors, according to the *Delta Democrat Times*. He is off to London to attend some sort of earth-shaking international symposium with other chiropractors.

The same news story says that the chiropractor is scheduled to present the Lord Mayor of London with an honorary colonel's commission in behalf of Governor Paul B. Johnson and the key to the city of Greenville in behalf of Mayor Pat Dunne.

So tally ho, Colonel Mayor, here's the key!—R.B.K.



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WATER**



METAHYDRIN (trichlormethiazide) is prescribed by physicians because it not only approximates the diuretic efficacy of parenteral meralluride injection . . . but, *it is the least expensive of all "brand-name" thiazides.* Therefore, when you prescribe METAHYDRIN (trichlormethiazide) your patients receive the thiazide diuretic that removes a little more salt and water than earlier thiazides, with relatively less loss of potassium . . . and, it's therapy they can more easily afford . . . *only pennies a day.*

## **METAHYDRIN®**

(trichlormethiazide)

oral diuretic

**Dosage:** One 2 or 4 mg. tablet once or twice daily.

**Precautions:** As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

**Side Effects:** Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have occasionally been noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by the administration of thiazides.

**Contraindications:** Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

**How Supplied:** Bottles of 100 and 1000 tablets.

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## PERSONALS

GUY D. CAMPBELL of Jackson has been elected 1966-67 president of the Mississippi Tuberculosis Association. J. T. HAMRICK of Jackson was named to the association's board of directors. The pioneer voluntary health agency annually sponsors the famed Christmas Seal campaign.

RICHARD H. FENSTERMACHER of Vicksburg is the new president of the Warren County Chapter of the American Cancer Society. He had previously served as vice president and is a long time member of the state division's board of directors.

PAUL H. MOORE of Pascagola has been named vice president of the Pascagoula Rotary Club.

CHESTER W. MASTERSON has recently become associated with EDLEY H. JONES and PATRICK G. McLAIN of Vicksburg.

ROBERT H. MIDDLETON, JR., of Biloxi will serve as chairman for the 1966 fund campaign of the Harrison County Chapter of the American Cancer Society. The new chairman is associated with the Trudeau-Bolton Clinic.

HENRY P. MILLS, JR., of Jackson has been certified as a diplomate of the American Board of Ophthalmology. He has recently relocated his professional office in the new Medical Tower at 440 East Woodrow Wilson Drive.

RAY F. MOTLEY has announced the opening of the Physicians Laboratory at 322 South 10th Avenue, Laurel. He will practice anatomical and clinical pathology.

CHARLES L. NEILL of Jackson, president of the Council School Foundation, has announced acquisition of seven acres for the construction of a new private school to serve southwest Jackson and central Hinds County. The foundation already operates a private, 12 grade school in north Jackson.

WALTER R. NEILL of Jackson was among entrants sailing in the recent Mobile Bay-Dolphin Island regatta. Flying the ensign of the Jackson Yacht Club, Dr. Neill was among the capital city crews who won second and third places.

CHARLES PRUITT, JR., of Magee has been named campaign manager for Rep. Prentiss Walker, Re-

publican candidate for the U. S. Senate in the November general elections.

C. D. TAYLOR, JR., will serve as a member of the board of directors of the newly-organized Pass Christian Historical Society. Goal of the new organization is purchase of the historic Dixie White House for preservation as a state shrine.

C. C. THOMPSON of Columbia has been elected medical representative of the new Marion County Heart Association. He continues to serve as a director of the Mississippi Heart Association.

SHERROD R. TOWNS of Union Church and Mrs. Towns were honored at Natchez by their nephew, CHARLES H. MARTIN, and Mrs. Martin on the occasion of Dr. Towns' 90th birthday. He is an Emeritus member of the association.

B. Z. WELCH of Biloxi was recently honored by the Biloxi Lions Club as one of the two charter members and upon the occasion of his 60th anniversary in the practice of medicine. A special congratulatory letter from EVERETT CRAWFORD, 1965-66 president, was read and presented. Dr. Welch is an Emeritus member of the association and a member of the Fifty Year Club.



## NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

BROADUS, LLOYD ZEDRIC, Purvis. Born Purvis, Miss., Feb. 6, 1924; M.D., University of Utah College of Medicine, Salt Lake City, 1947; interned Salt Lake County General Hospital, Utah; elected April 7, 1966, by South Mississippi Medical Society.

GILLESPIE, WILLIAM JAMES, JR., Jackson. Born Aberdeen, Miss., July 26, 1930; M.D., University of Mississippi School of Medicine, Jackson, 1960; interned University Hospital and Hillman Clinic, Birmingham, Ala., one year; internal medicine residency, University of Mississippi School of Medicine, Jackson, two years; medicine fellowship, University of Mississippi School of Medicine, Jackson; postdoctoral research fellow, The University of Oxford, England, one year; postdoctoral research fellow, University of Mississippi School of Medicine, Jackson, one year; elected Jan. 4, 1966, by Central Medical Society.



In colicky infants Pediatric Piptal with Phenobarbital slows down spasm, diminishes pain and crying and improves feeding patterns. It permits sleep and rest for patient and family. The less than hypnotic amount of phenobarbital in the recommended dose affords a mild, calming action and enhances the antispasmodic action of Piptal (pipenzolate bromide). The latter drug, as reported in the medical literature, has a favorable ratio of effectiveness to side-effects which is unusual in anticholinergics and thus is particularly appropriate to pediatric use.

QUIETS PHONES  
QUIETS PARENTS  
QUIETS **COLIC**

## **PEDIATRIC PIPTAL® WITH PHENOBARBITAL**

each cc. contains 6 mg. phenobarbital (warning: may be habit forming); 4 mg. Piptal® (pipenzolate bromide), and 20% alcohol.

Pleasant-tasting Pediatric Piptal with Phenobarbital is miscible in milk, formulas and fruit juices, and may also be given by dropper directly on the infant's tongue. Dosage is 0.5 cc. 15 minutes before feeding; in severe cases, 1.0 cc. four times daily. High doses may occasionally cause constipation with tenesmus and, rarely, flushing without fever. It is contraindicated in bowel obstruction or sensitivity to phenobarbital or anticholinergics. Available in 30 cc. dropper bottles, droppers calibrated to deliver 0.5 cc.

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## NEW MEMBERS / Continued


MARTIN, JAMES BURKE, Monticello. Born Jackson, Miss., Dec. 31, 1939; M.D., University of Mississippi School of Medicine, Jackson, 1964; interned John Peter Smith Hospital, Ft. Worth, Tex., one year; elected Dec. 14, 1965, by South Central Mississippi Medical Society.



## DEATHS

BROWN, ROBERT NEIL, Sanatorium. M.D., University of Tennessee College of Medicine, Memphis, 1929; interned Knoxville General Hospital, Tenn., one year; member, American Society of Clinical Pathologists and the American College of Chest Physicians; a past president of the Mississippi Thoracic Society; died April 6, 1966, aged 62.

 FIELD, SAMUEL EUGENE, SR., Centreville. M.D., Tulane University School of Medicine, New Orleans, La., 1920; interned T. C. I. Hospital, Fairfield, Ala., one year; residency, T. C. I. Hospital, Fairfield, Ala., three years; member, American Association of Railroad Surgeons, the Southeastern Surgical Congress, and Southern Medical Association; Fellow, American College of Surgeons; a past president of the Amite-Wilkinson Counties Medical Society; secretary of the Amite-Wilkinson Counties Medical Society since 1952; served as a member and president of the Mississippi State Board of Health; died April 7, 1966, aged 67.

 KELLIS, JOHN HOWARD, Shuqualak. M.D., University of Alabama, Birmingham, 1917; member, Southern Medical Association; died April 4, 1966, aged 74.

LYLES, S. T., Oxford. M.D., Memphis Hospital Medical College, Tenn., 1910; died April 9, 1966, aged 82.

SISSON, SARNIE NATHANIEL, Greenville. M.D., Meharry Medical College, Nashville, Tenn., 1921; interned George W. Hubbard Hospital, Nashville, Tenn., one year; died April 3, 1966, aged 72.

WIITA, ROBERT MATTHEW, Jasper, Ala. M.D., Duke University School of Medicine, Durham, N. C., 1955; died July 29, 1964, aged 34.

## State Morbidity Reported Through April 15

The Mississippi State Board of Health reports the following occurrence of morbidity for 1966 through 15th week of the year, ending April 15. Case totals are shown opposite the disease condition.

Tuberculosis, pul. ....	265
Tuberculosis, O.F. ....	6
Dysentery, Bac. ....	14
Salmonella Inf. ....	7
Meningococcal infections ....	10
Encephalitis, Inf. ....	4
Hepatitis, infectious ....	83
Mononucleosis, infectious ....	12
Helminthic infections	
Hookworm ....	303
Ascariasis ....	100
Streptococcus infections	
Strep throat ....	1,655
Scarlet fever ....	32
Mumps ....	175
Measles ....	590
Influenza ....	406
Chickenpox ....	173
Syphilis	
Early ....	247
Late ....	44
Gonorrhea ....	1,247

## Nixon, Murray Will Address State Officers

Members of the Conference of Presidents and Other Officers of State Medical Associations will hear a former Vice President of the United States and the president of the Australian Medical Association at the June 26 annual meeting in Chicago.

The state officers group will meet in a morning session just before the AMA House of Delegates is convened at the 115th Annual Convention that afternoon.

Slated to speak, according to Dr. Walter C. Bornemier of Chicago, CPOOSMA president, are Richard M. Nixon and Dr. Angus Murray of Australia. Mr. James A. Waggner of Indianapolis, executive secretary of the Indiana State Medical Association, is chief executive officer of the state officers organization.





## Book Reviews

**Surgery of the Foot.** By Henri L. Du Vries, M.D., Assistant Clinical Professor of Orthopaedic Surgery, University of California School of Medicine and Associate Orthopaedic Surgeon, University of California Medical Center. 567 pages with illustrations. St. Louis: The C. V. Mosby Company, 1965. \$17.50.

This highly authoritative reference book has been updated and improved. The second edition also shows the benefit of certain wise deletions.

Fifteen major contributing authors, all outstanding men, are now properly identified with their own chapters. Basic anatomy, biomechanics and pathophysiology are thoroughly covered. Many surgical techniques are described in step-by-step detail. Whole chapters are devoted to such specific subjects as "Disorders of the Sesamoids" (20 pages, 30 illustrations). Controversial subjects are often presented with the opinions of more than one writer. Good indexing makes the information readily accessible and additional references are listed at the end of each chapter.

*Surgery of the Foot*, as the title implies, is really for the orthopaedist or surgeon with a serious interest in correcting complex foot disorders. Non-surgical measures such as wedging and arch supports are not even discussed. On the other hand "ingrown nails" are exhaustively detailed under the preferred title "Hypertrophy of the Ungual-abia" (15 pages, 27 illustrations and 23 references).

Not all of the practitioners' daily problems will be solved by Du Vries' book, but it would make a valuable addition to his library. Many non-physicians could benefit from the author's strong condemnation of current styling and conventional foot wear. The basis for his criticism is scientifically founded.

The second edition, like the first, is handsomely bound and benefits from the same high standard of printing. Selected illustrations are well reproduced. With 448 figures and 780 references, this edition offers more meat and less fat.

DONALD T. IMRIE, M.D.

**Diseases of the Newborn.** 2nd Edition. By Alexander J. Schaffer, M.D., Associate Professor of Pediatrics, The Johns Hopkins Medical School. 1,023 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. \$22.00.

Through the ages care of the sick newborn has been regarded as among the most unpredictable and insidious aspects of medicine. Thus, those physicians responsible for care in the newborn nursery were particularly enthused to see published in 1960, Dr. Schaffer's *Diseases of the Newborn* and the subsequent printing of a second edition in 1965.

This thousand-page volume is a clinically oriented reference written from the viewpoint of one in the actual practice of caring for newborns. The book is organized in sections dealing with the treatment of such specific clinical problems of the newborn as jaundice, respiratory distress, and the varied types of intestinal obstruction. There are numerous photographs, some in color, and countless x-ray film prints. One unique and most helpful chapter deals with the perplexing and frustrating dilemma of "Odd Looking Babies"! An appendix broadens the volume as a reference by containing an extensive list of drugs used during the newborn period with dosage calculations. Also in the appendix are listed specific recommendations regarding management of full-term and premature nurseries, resuscitation of the newborn in the obstetrical delivery room, and a "check-off list" for dealing with the jaundiced newborn.

This second edition is updated to include latest data regarding chromosomal aberrations, immunologic disorders, phenylketonuria, risks of early smallpox vaccination, significance of a single umbilical artery, and recent developments in the treatment of pulmonary hyaline membrane disease. Physically this volume contains even more illustrations and has a much stronger binding than previously.

*Diseases of the Newborn* by Dr. Alexander J. Schaffer would be an extremely valuable reference volume to have available on the chart desk in each newborn nursery of our state.

WILLIAM F. SISTRUNK, M.D.

## Blue Plan Offers Medicare Supplement

A new health plan designed especially for people age 65 and over to supplement the Medicare program has been announced by Mississippi Blue Cross-Blue Shield. This new plan for senior citizens is called "Senior Med."

In explaining the need for this additional protection, Dr. J. C. Woosley, president of Mississippi Hospital and Medical Service stated: "Medicare brings to our senior citizens very broad and inexpensive health-care protection, but it does have certain gaps with limitations and coinsurance which could cause the individual some out-of-pocket expense."

"Our Senior Med plan has been specifically designed to help cover these gaps so that, combined with Medicare, it will provide people 65 and over with a more complete health-care program at a cost that would safeguard even the most limited budget."

The basic benefits of Mississippi Blue Cross-Blue Shield's Senior Med include:

- Payment of the first \$40 for inpatient hospital care. (Under Medicare, the patient would be required to pay this deductible amount.)

- Payment of the \$10.00 per day coinsurance from the 61st through the 90th day. (Medicare has a \$10.00 deductible for this period.)

- Payment of additional room allowance up to \$4.00 per day toward private accommodations for up to 120 days per spell of illness. (Medicare provides for only a semi-private room.)

- Payment for hospital out-patient services within 72 hours for minor surgery, and accidents. Medicare Part 1-A does not provide these services. Duplicate payment will not be made to patients for services paid for under Medicare Part 1-B.

- Payment for hospitalization outside of the United States, including all of the above benefits, plus those provided by the hospital portion—Part 1-A—of Medicare. In most cases, Medicare benefits are not provided outside the United States or its territories.

According to Dr. Woosley, over 50,000 current Blue Cross-Blue Shield members have been given the opportunity to take advantage of this special Senior Med plan.

"All of our members," he said, "in fact, all Mississippi citizens eligible for Medicare, are invited to apply for Blue Cross-Blue Shield's Senior Med. The combination of Medicare and this new coverage will give them excellent health care protection at modest cost."

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**Contraindications:** In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions.

**Precautions:** Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

**Dextro-amphetamine sulfate:** Use by unstable individuals may result in psychological dependence.

**Meprobamate:** Careful supervision of dose and amounts prescribed is advised; especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of pre-existing symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dose—operation of motor vehicles, machinery or other activity requiring alertness should be avoided. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side Effects:** Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

**Dextro-amphetamine sulfate:** Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

**Meprobamate:** Drowsiness may occur and can be associated with ataxia, the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor, and respiratory collapse.



## Hospital Admissions Peak, Inpatient Births Decline

Hospital outpatient visits and admissions reached new peaks in 1965 while total births continued the sharp decline which started in 1961, according to a scientific sampling of non-federal short-term general (community) hospitals by the American Hospital Association.

More than 5,700 short-term general hospitals are registered by AHA. The sampling of 628 hospitals represents AHA's nine geographic regions and eight hospital size groups.

Total expenses for the community hospitals increased \$740 million from the 1964 total of \$8.5 billion to a new high of \$9.2 billion. The largest share of hospital expenses is wages and salaries which jumped from \$5.2 billion to \$5.6 billion.

Outpatient visits in 1965 showed an increase over 1964 in 11 of the 12 months. The October, 1965, total of 7,715,507 was about 30,000 lower than the previous October. However, in March, 1965, hospital outpatient clinics handled a record 8,016,446, or an average of 267,000 daily. Sep-

tember, 1965, ranked second in this area with 7,819,576 outpatients.

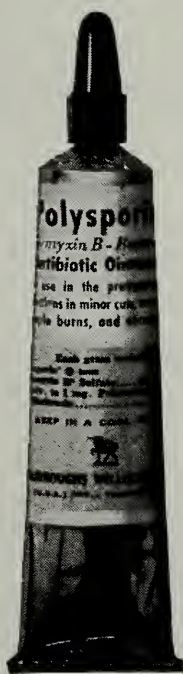
The decline in total hospital births coincides with a report earlier this month by the Public Health Service which placed total 1965 births in the United States at 3,767,000. PHS said the 1965 total was on a level with the birth rate for the mid-1930's.

Earlier AHA reports show the decline in births in hospitals starting in 1961 when they were at a peak of 3,750,494; in 1962 hospital births dropped to 3,689,253; in 1963 the decline continued and reached 3,622,901; in 1964 there was a sharper drop to 3,526,375, nearly 100,000 lower than the previous year. And in 1965 the decline continued with total hospital births recorded at 3,264,709, just about what the hospital birth rate was in 1954.

Admissions to community hospitals increased by more than 700,000 in the last reporting year to a new high of 26.7 million. With the implementation of Medicare in the next reporting year and hospital facilities being expanded and newly constructed throughout the country the admissions increase is expected to be even greater in 1966.

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**broad-spectrum antibiotic  
therapy with minimum risk  
of sensitization**

**Caution:** As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Contraindication:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

**Supplied:** In ½ oz. and 1 oz. tubes

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## MEETINGS

### NATIONAL AND REGIONAL

American Medical Association, Annual Convention, June 26-30, 1966, Chicago. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago, Ill. 60610.

American Academy of General Practice, Oct. 8-13, 1966, Boston. Mr. Mac F. Cahal, Executive Director, Volker Blvd. at Brookside, Kansas City, Mo. 64112.

Southern Medical Association, Nov. 14-17, 1966, Washington. Mr. Robert F. Butts, Executive Director, 2601 Highland Ave., Birmingham, Ala. 35205.

### STATE AND LOCAL

Mississippi State Medical Association, May 15-18, 1967, Jackson. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson.

Amite-Wilkinson Counties Medical Society, Third Monday March, June, September, December. S. E. Field, Jr., Centreville, Secretary.

Central Medical Society, First Tuesday, January, March, May, September, November, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. James R. Cavett, Jr., Suite B-6, Medical Arts Building, Jackson, Secretary.

Claiborne County Medical Society, First Monday January and July, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Port Gibson, Secretary.

Clarksdale and Six Counties Medical Society, Third Wednesday March and First Wednesday November, 2:00 p.m., Clarksdale. Robert L. Forman, Coahoma County Hospital, Clarksdale, Secretary.

Coast Counties Medical Society, First or Second Wednesday, January, March, May, September, and November. C. D. Taylor, Jr., 113 Davis Ave., Pass Christian, Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Secretary.

DeSoto County Medical Society, Second Thursday, January, April, July, and October, 1:00 p.m., Mary's Restaurant, Hernando. Malcolm D. Baxter, Jr., McIntosh-Baxter Clinic, Hernando, Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Secretary.

Homochitto Valley Medical Society, First Tuesday Quarterly, Jefferson Davis Memorial Hospital, Natchez. Walter T. Colbert, Jefferson Davis Memorial Hospital, Natchez, Secretary.

North Central District Medical Society, Third Wednesday March, June, September, and December. William E. Riecken, Jr., P. O. Box 831, Kosciusko, Secretary.

Northeast Mississippi Medical Society, Second Tuesday, March, June, September, and December, Corinth. S. Jay McDuffie, Nettleton, Secretary.

North Mississippi Medical Society, First Thursday, April and October, Oxford. M. Beckett Howorth, Jr., 2200 S. Lamar Blvd., Oxford, Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. Joseph C. Griffing, Lucius Olen Crosby Memorial Hospital, Picayune, Secretary.

Prairie Medical Society, Second Tuesday, March, June, September, December. J. M. Griffith, 824 Second Ave. North, Columbus, Secretary.

South Central Mississippi Medical Society, Second Tuesday March, June, September, and December. Julian T. Janes, Jr., 304 Clark, McComb, Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. John E. Green, Green Clinic, Hattiesburg, Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg. Patrick G. McLain, 1301 Washington St., Vicksburg, Secretary.





# JOURNAL of the Mississippi STATE MEDICAL ASSOCIATION

Volume VII  
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## MS Society Offers Research Fellowships

The National Multiple Sclerosis Society has announced sponsorship of a program of post-doctoral fellowships to assist physicians in clinical or fundamental research related to multiple sclerosis and allied disorders, according to Harry W. Hutchins, Jr., of Jackson, president of the Central Mississippi Chapter.

The fellowships provide a basic stipend of \$4,000 to \$10,000 annually and are designed for M.D.s or Ph.D.s for whom further support may be critical in obtaining the training needed for research or teaching assignments. Established investigators will also be considered when more training is clearly needed to increase research or teaching potential.

The stipend, it was pointed out by Hutchins, depends upon the applicant's professional status, his training and experience, research attainments and family dependency status. The Fellowship Committee determines the amount of stipend to be paid.

Application may be made at any time of the year on a form available from the National Society's Fellowship Committee. Fellowship awards are customarily made for one calendar year. Six months after formal notification of acceptance, one—and sometimes two—additional years of support may be provided if justification is found in the original application or supplied later by means of a progress report and renewal request. Ordinarily, total tenure cannot exceed three years. Additional support is dependent on continued sponsor endorsement.

A travel and maintenance allowance of \$150 is available to post-doctoral Fellows each year for attendance at scientific meetings that relate to their special interests. In addition, grants up to \$500 may be made to a Fellow's sponsoring institution to cover costs that relate to Fellow's training or study.

Mr. Hutchins stated that M.D.s or Ph.D.s interested in the Society's fellowship program should write for information to Dr. James Q. Simmons, Jr., Director of Medical Programs, National Multiple Sclerosis Society, 257 Park Avenue South, New York, New York.

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**Contraindications:** In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions.

**Precautions:** Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

**Dextro-amphetamine sulfate:** Use by unstable individuals may result in psychological dependence.

**Meprobamate:** Careful supervision of dose and amounts prescribed is advised; especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of pre-existing symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dose—operation of motor vehicles, machinery or other activity requiring alertness should be avoided. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side Effects:** Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

**Dextro-amphetamine sulfate:** Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

**Meprobamate:** Drowsiness may occur and can be associated with ataxia, the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor, and respiratory collapse.



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Corcoran, A. C.: The choice of drugs in the treatment of hypertension. In: *Drugs of Choice* 1966-67, W. Modell, Ed., St. Louis, C. V. Mosby Company, 1966, p. 417.

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**Indications:** DIUTENSEN-R may be employed in all grades of essential hypertension.


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However, adjustment of dosage to suit individual circumstances may be required. Please refer to package insert for full particulars. **Side effects and**

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DIUTENSEN-R should not be used in patients with a known intolerance to reserpine. Package inserts furnish a complete summary of recommended cautions related to each of the ingredients of DIUTENSEN-R.

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# NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

July 1966

Dear Doctor:

More than eight million Americans over age 65 are said to have purchased insurance coverage to supplement Medicare. Most contracts being issued by commercial companies offer weekly indemnity benefits, while many Blue plan supplements pay hospital, outpatient, and Part 1-B deductibles.

Of the 19 million over 65, 17.2 million signed up for voluntary coverage under Part 1-B. First billing notices for those who will pay \$3 premium directly to government have been mailed. Social Security Administration says that 6,900 hospitals are in compliance with Title VI of the Civil Rights Act.

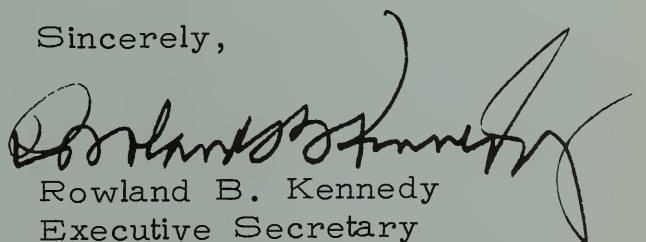
Hearings have been conducted on Presidential Reorganization Plan No. 3 which would reshape the United States Public Health Service. Proposal, pending before the Senate, seeks division of PHS into eight operational units which will include National Institutes of Health and National Library of Medicine.

Mississippi's senior Senator, Jim Eastland, has urged HEW to reconsider Medicare integration guidelines for hospitals. Senator Eastland noted that the primary purpose of a hospital is the treatment of patients and not social experimentation.

The New York Times reports that Dr. Edward R. Annis is leading a nationwide campaign to convince physicians that they should bill Medicare patients direct. Dr. Annis cited three examples of Medicare interference in the practice of medicine as being: (1) setting of reasonable charges for professional fees, (2) interference in the relationship between hospitals and hospital-based specialists, and (3) establishment of integration requirements.

The recent session of the Mississippi Legislature saw 1254 bills introduced in the House and 846 in the Senate. Approximately 15 per cent of the bills dealt with health and medical matters. The session was one of the longest in the history of the state. Lawmakers started and ended the session with salary increases for themselves.

Sincerely,



Rowland B. Kennedy  
Executive Secretary



## DATELINE - MEDICAL AMERICA

### Federal Auto Safety Standards By 1968

Washington - If the Senate has its way federal safety standards for new automobiles will go into effect no later than January 31, 1968. The administration originally proposed to give the Secretary of Commerce standby authority to establish standards as needed but Senate Commerce Committee would not buy this.

### Kerr-Mills Legalcare

Jackson - The Mississippi State Bar at its recent convention in Jackson endorsed a proposal for the state to provide matching funds for setting up a federal-state program of legal aid to the indigent. The Mississippi Legislature refused to adopt the program this year.

### Smog Controls Held Deficient

San Francisco - Surgeon General William H. Stewart has called for air pollution to be brought under a higher degree of control in a speech before the Air Pollution Control Association at its 59th Annual Meeting. The association, whose membership is composed of scientists, industrial executives, and public officials, was told by General Stewart that of the 33 states which purport to have air pollution programs, only a half-dozen engage in more than a minimal degree of actual activity.

### Development Of A Computer Based Poison Data File

Washington - HEW will set up a computer-based file of information on the poisonous potentialities of all chemicals and drugs known to man. The President's Science Advisory Committee in recommending the computer file noted that 75,000 new chemical compounds are reported each year and that approximately 300,000 scientific papers related to drugs and chemicals of interest in human biology are published yearly.

### A Laser Gun, Shades Of Buck Rogers

Albuquerque - Science is on the threshold of developing a laser requiring no external energy. The new class of lasers is to be known as chemical lasers because their energy is to be derived from their internal chemistry rather than from an outside source. The new lasers may be used by astronauts making that first U. S. moon trip.

### Keogh Amendments, Removal Of 50 Per Cent Limitation

Washington - The House of Representatives by a vote of 291 to 0 has passed a bill which would remove the present 50 per cent tax deduction limitation on funds set aside for retirement purposes by the self-employed under provisions of the 1962 Keogh Bill. The bill, H.R. 10, will now go to the Senate Finance Committee which is chaired by the author of the 50 per cent deduction limitation, Sen. Russell B. Long.



# WINNERS OF THE 1965 COMPETITION



*J. Harris Fleming, Director of Trade Relations, Pfizer Laboratories and J. B. Roerig & Co.; Dr. Edward S. Brady, Professor of Pharmaceutical Chemistry, Univ. of South. Calif.; Grover C. Bowles, President of the APhA; Sam Brock, Sales Manager, Pfizer Laboratories.*

## Individual Award:

DR. EDWARD S. BRADY  
Professor of Pharmaceutical Chemistry,  
University of Southern California.

The central feature of Dr. Brady's entry was a series of 28 half-hour TV programs entitled, "The Apothecary." Dr. Brady wrote the scripts and was the sole performer in each of the programs. During 1965 he made 200 appearances in person or on film. His total audience may now be measured in the millions.



*Sam Brock, Sales Manager, Pfizer Laboratories; Benjamin Levine, President, Cons. Bklyn. Retail Pharmacists, Inc.; Grover C. Bowles, President of the APhA; J. Harris Fleming, Director of Trade Relations, Pfizer Laboratories and J. B. Roerig & Co.; Moe Weiss, Executive Secretary, Cons. Bklyn. Retail Pharmacists, Inc.*

## Organization Award:

CONSOLIDATED BROOKLYN  
RETAIL PHARMACISTS, INC.

Under the direction of Moe Weiss, Executive Secretary, all available media were used for participation in several special pharmacy "Weeks." Large posters were used on buses to provide maximum exposure to the 3,000,000 residents of the Brooklyn area. Radio, TV and newspapers dramatized the everyday experiences of the pharmacist in his efforts to serve the public interest.

The panel of judges for the 1965 Public Education Awards Competition included the APhA Committee on Public Relations, with special assistance from Robert B. Wolcott, Jr., President of Robert B. Wolcott Associates, Inc. of Los Angeles and President of the Public Relations Society of America, and Leland R. Rosemond of N. W. Ayer & Son, Inc. of Philadelphia. In addition to Committee Chairman Eckstrom who is Associate for Professional Services, Eli Lilly and Company, the members of the Committee are Arthur F. De Vaux, community pharmacist of Ann Arbor, Michigan; John F. Fochtman, Assistant Secretary, the National Pharmaceutical Council, Inc.; Dr. Richard P. Penna, pharmacy pharmacist and Assistant Clinical Professor of Pharmacy at the University of California, and John Shostak, pharmacist and member of the Connecticut State Legislature.

*Displays of the winning entrants were shown at the 113th APhA Annual Meeting in Dallas, April 24 to 29, 1966.*

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**DOSAGE:** *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

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Additional information available to physicians upon request.  
Eli Lilly and Company, Indianapolis, Indiana 46206.

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ORIGINAL PAPERS

# Surgical Treatment of Aortic Stenosis

CHARLES W. PEARCE, M.D., and

OSCAR CREECH, JR., M.D.

New Orleans, Louisiana

WITHIN THE PAST DECADE commissurotomy or, at times, valvar reconstruction has permitted relief of aortic stenosis. Support of myocardial function by coronary arterial perfusion during cardiopulmonary bypass has also been improved. Development of a satisfactory aortic valvar prosthesis by Starr and associates<sup>1</sup> now permits replacement of severely diseased valves that are unsuitable for commissurotomy. These advances warrant reconsideration of the various types of aortic stenosis, their operative treatment, and results of operation.

## ETIOLOGY

Congenital aortic stenosis is more frequent than is commonly realized. Some patients, previously considered to have acquired the disease, have actually had it since birth. In time, fibrosis and calcification of the stenotic valve may prevent distinction from rheumatic valvar disease. Three types of congenital aortic stenosis may be distinguished, the most common of which is valvar stenosis, which obliterates the commissures and produces a small central opening. The valve is often bicuspid rather than tricuspid. Less common is subvalvar stenosis, in which a rather thin membrane or diaphragm with a small central orifice is found just proximal to an otherwise normal aortic valve. Supravalvar stenosis, which consists

of concentric narrowing of the aorta immediately above the aortic valve, is rare.

Concentric hypertrophy of the left ventricle below the aortic valve may cause obstruction to flow of blood from the left ventricle. Clinical manifestations are those of valvar aortic stenosis. In infancy and childhood, subvalvar muscular aortic

---

*All patients with aortic stenosis should be carefully evaluated. Children with symptoms or with a gradient of 40 mm. Hg. proximal and distal to the aortic valve should be treated surgically. Risk of operation is less than 5 per cent, and results have been excellent in most patients. Appearance of symptoms in adults with aortic stenosis is ominous, and surgical treatment should be considered. Aortic commissurotomy may suffice occasionally, but prosthetic replacement is usually necessary. Risk of operation is less than 10 per cent in most patients, and pronounced improvement may be expected.*

---

stenosis may be due to endocardial fibroelastosis, whereas in young adults no specific cause has been identified.

Acquired aortic valvar stenosis is relatively common. Mild stenosis may be clinically apparent but asymptomatic, or may be an incidental observation at necropsy when death was from another

---

From the Department of Surgery, Tulane University School of Medicine.

## STENOSIS / Pearce and Creech

cause. Moderate stenosis, however, is usually accompanied by symptoms. Most acquired aortic stenosis is due to rheumatic disease, but some patients have no history of rheumatic fever and no changes in other valves consistent with rheumatic heart disease. In such patients, a form of atherosclerosis may be responsible for stenotic change in the aortic valve. Whatever the cause, patients have clinical manifestations and laboratory data similar to those for patients with rheumatic aortic stenosis.

### CLINICAL MANIFESTATIONS AND DIAGNOSIS

Occasionally, congenital aortic stenosis will produce congestive heart failure and endanger the life of the infant. Other congenital abnormalities of the heart and great vessels often coexist. Although symptoms do not usually appear until late in childhood or early adulthood, asymptomatic children with congenital aortic stenosis have died suddenly. For this reason alone, thorough evaluation and consideration of surgical treatment are mandatory. Some children may have less tolerance to exercise, and others may have palpitation, precordial discomfort on exertion, or bouts of dizziness. Ultimately, congestive heart failure may supervene.

Patients with acquired stenosis of the aortic valve, especially those with associated coronary sclerosis, may also die suddenly. More commonly, the left ventricle gradually becomes hypertrophied. As compensatory function of the left ventricle decreases, symptoms appear. Dizziness or syncope may follow transient cerebral ischemia, which is related to sudden decrease of cardiac output during fleeting disturbance of rhythm, or to peripheral vasodilation in the presence of fixed cardiac output. Angina pectoris occurs in about 40 per cent of patients with aortic stenosis, about half of whom have coronary atherosclerosis. In other patients, exertional dyspnea and palpitation are the first signs of aortic stenosis.

### FUNCTIONAL DETERIORATION

Once symptoms appear, left ventricular function progressively deteriorates. Takeda and associates<sup>2</sup> reported a mean life expectancy of 2.8 to 4.4 years after appearance of symptoms among 65 adult patients with aortic stenosis treated medically. Anderson<sup>3</sup> found congestive failure to be particularly ominous, and Mitchell and associates<sup>4</sup> found the average length of survival to be

only 22.7 months in a large group of patients with "pure" aortic stenosis after development of congestive failure.

Roentgenograms of the chest show left ventricular enlargement, although concentric hypertrophy may widen the cardiac silhouette only slightly. In addition, poststenotic dilation of the ascending aorta is common. In the presence of congestive failure, cardiac enlargement is greatly increased, the left atrium is prominent, and the pulmonary vascular system is congested. Left ventricular hypertrophy, of variable degree, is almost always detectable in electrocardiograms.

Of special importance is the pressure gradient across the stenotic aortic valve, which is determined during catheterization of the left side of the heart by simultaneous measurement of ventricular and peripheral arterial pressures. Patients with symptoms usually have a gradient of 40 mm. Hg. or more. In patients with congenital aortic stenosis, a cardio-angiogram should be made by injection of radiopaque material into the left ventricle, to determine the type of stenosis and thus facilitate the surgical approach.

### INDICATIONS FOR OPERATION

Infants with congestive heart failure due to aortic stenosis may need urgent operation. If medical treatment is satisfactory, however, operation should be deferred. In children with aortic stenosis, including those without symptoms, operation should be done if the aortic valvar gradient is 40 mm. Hg. or more. If operation is not done, children with asymptomatic aortic stenosis may die suddenly. Moreover, restoration of valvar mobility with aortic stenosis may retard or prevent development of valvar fibrosis and calcification.

Operation should be deferred in adult patients with aortic stenosis who have no symptoms, unless electrocardiograms and roentgenograms suggest rapidly increasing or severe left ventricular hypertrophy. The patient with symptoms due to aortic stenosis should be completely evaluated, including catheterization of the left side of the heart in most circumstances. If the aortic valvar gradient exceeds 40 mm. Hg., operation is usually advisable.

Every effort should be made to relieve congestive heart failure by medical treatment before operation. The patient may have to be hospitalized for several weeks or longer, with bed rest, carefully adjusted dosage of digitalis, diuretic treatment, and other measures. The possibility of active rheumatic carditis should be carefully considered. Patients with recent bacterial endocarditis must be treated particularly carefully. Complete elimination of infection should be confirmed by



blood cultures several weeks before operation.

In patients more than 45 to 50 years of age, associated coronary atherosclerosis must be carefully considered. Presence of angina pectoris in the adult patient should suggest coronary arterial disease, despite Anderson's observation that more than half of his patients with aortic stenosis and angina pectoris had little or no occlusive disease in the coronary arteries at necropsy.<sup>3</sup> Electrocardiographic evidence of previous myocardial infarction indicates coronary atherosclerosis, since myocardial infarction is rarely due to aortic stenosis alone. Since angina pectoris may reflect both aortic stenosis and occlusive coronary disease, however, significant pressure gradient across the aortic valve indicates that surgical correction of the stenosis should relieve symptoms.

### OPERATIVE PROCEDURE

In infants with congenital aortic stenosis requiring urgent operation, either of two technics may be used: temporary inflow occlusion with or without mild hypothermia, or extracorporeal circulation, which gives the surgeon more time for correction of stenosis. Fused aortic commissures are incised under direct vision. When stenosis is due to a subvalvar membrane, the aortic leaflets are carefully retracted and the membrane is excised.

Operation for congenital aortic stenosis during childhood is done with complete cardiopulmonary bypass. Mild systemic hypothermia and inflow occlusion have been used successfully in the past, but they may not allow enough time for precise correction of the valvar deformity. Median sternotomy provides excellent exposure of the aortic root, and longitudinal aortotomy allows access to the valve. In patients with valvar stenosis, the commissures are carefully identified and incised. Considerable care is necessary, since improper incision may cause aortic valvar incompetence. When present, a subvalvar membrane should be excised as completely as possible. In patients with supra-valvar stenosis, longitudinal aortic incision is carried well above and below the stenotic region, and the aortic lumen is widened at this point by suturing a teflon or dacron patch to the margins of the incision. When the narrowed lumen extends to the aortic arch, it represents hypoplasia of the ascending aorta.

### METHODS EMPLOYED

Several methods have been used for correction of hypertrophic subvalvar aortic stenosis. Access to the stenotic region may be obtained through an aortic incision and retraction of the aortic

valvar cusps, after which the stenotic region is excised. Exposure is not usually satisfactory, however, and results have varied. An alternative method which has been successful is to incise the stenotic region longitudinally from within, the circular region of stenosis being thus opened. Recently, apical left ventriculotomy has been used successfully to provide exposure of the subvalvar stenosis from the ventricular aspect, but further experience will be required to determine the ultimate usefulness of this approach.

For the adult patient with acquired aortic stenosis, or with congenital stenosis and calcification and advanced fibrotic change, the operation is similar. Complete cardiopulmonary bypass with extracorporeal circulation is always required. Methods that have been abandoned include use of transventricular dilators, hypothermia, and inflow occlusion, and supra-valvar finger dilation through a plastic sleeve sutured to the wall of the ascending aorta. In all these, the fatality rate was high and relief of stenosis was often inadequate. Moreover, aortic insufficiency often occurred, and calcific emboli were sometimes released.<sup>5</sup>

Support of the myocardium during correction of the valvar defect is mandatory, and its efficiency is directly related to survival. Both profound systemic hypothermia and myocardial cooling by intermittent perfusion of coronary arteries with cold blood or packing of the heart in saline ice slush have been used for this purpose. In our experience, continuous coronary perfusion with blood at 37° C. supports myocardial function best during cardiopulmonary bypass.

### TRANSVERSE AORTOTOMY

We use transverse aortotomy for exposure of the aortic valve. A vent passed through the left ventricular apex, to which continuous suction is applied, provides a bloodless field. If the valve can be corrected merely by incision of fused commissures, the coronary arteries need not be cannulated. If more than five or 10 minutes is required for commissurotomy and closure of the aortotomy, however, coronary perfusion is advisable.

Numerous attempts have been made to debride the calcific and fibrotic deposits on individual cusps to restore their mobility and relieve the stenosis may be only partly relieved, and reexamination of these patients indicates that continued loss of valvar mobility and recurrent stenosis are common.

For the patient with a calcified and fibrotic aortic valve, we excise the valve completely and replace it with a ball-valve prosthesis. The valve is fixed in a subcoronary position by multiple sutures passed through the teflon sewing ring of the valve and through the aortic annulus and valvar remnant (Figure 1). About 40 minutes of cardiopulmonary bypass is required for valvar replacement and closure of the aortotomy; this is well tolerated provided continuous coronary perfusion is used.

### RESULTS OF OPERATION

Results of commissurotomy in children with aortic valvar stenosis have been excellent; stenosis is completely or almost completely relieved. Risk of operation is extremely low, and none of our patients has died. Assessment of the ultimate result of operative treatment of these patients will require observation during the next decade or longer.

In adult patients with congenital or acquired aortic valvar stenosis, much depends on the severity of valvar deformity and calcification. If the aortic valvar cusps are well preserved and calcification is minimal or absent, commissurotomy alone will suffice. Risk of operation is usually less than 5 per cent, pressure gradient across the valve is greatly reduced, and almost complete relief of symptoms may be expected. Only a few patients, usually those 18 to 25 years of age, however, are suitable for treatment by commissurotomy alone.

In old patients and in those with valvar thicken-

ing and calcification, benefit from debridement or commissurotomy alone is limited. A significant pressure gradient across the valve may remain, symptoms often persist, and aortic insufficiency may result from operation. For these reasons excision of the valve with prosthetic replacement has become the operation of choice. Risk of operation has steadily fallen until it now approaches 5 per cent in patients in functional class III.

After valvar replacement, relief of symptoms or great improvement with decreased left ventricular hypertrophy may be expected (Figure 2). Careful medical treatment should be continued, and long-term use of anticoagulants appears to be advisable to minimize formation of thrombus and systemic arterial emboli.

For patients with more advanced disease, the case fatality rate is at least 10 per cent, and may be considerably higher in those with associated severe mitral valvar disease, pulmonary hypertension, and coronary arteriosclerosis. This risk must be balanced against the grave prognosis of continued nonoperative treatment. After recovery from valvar replacement, improvement may be dramatic, but continued close observation is mandatory.

### SUMMARY

All patients with aortic stenosis should be carefully evaluated. Because of the risk of sudden death, consideration should be given to surgical treatment of children with aortic stenosis, even though symptoms may not be present. Cardiac catheterization is essential, and demonstration of a gradient of 40 mm. Hg. or greater proximal and distal to the aortic valve is significant. Risk of

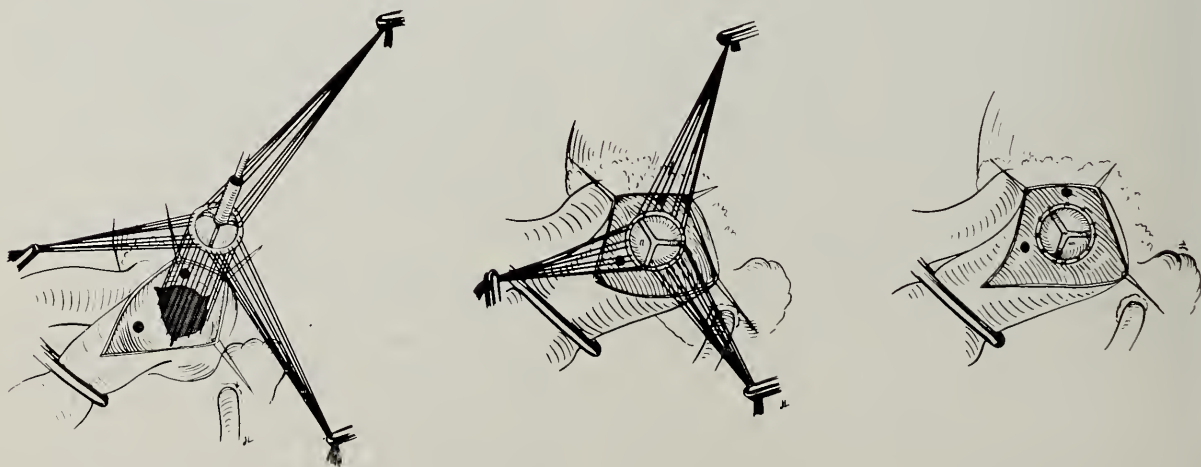


Figure 1. Left: After excision of diseased aortic cusps, sutures are placed in the valvar remnant and aortic annulus and are brought back through the

dacron ring of the prosthesis. Middle: The prosthesis is lowered into position below the coronary artery ostia. Right: Sutures are tied and cut.





Figure 2. Left: Before operation, the heart is enlarged, with prominence of left ventricle. Middle: After replacement of aortic valve, left ventricular

prominence has regressed, and heart size has returned to normal. Right: The aortic valvar prosthesis is seen best in oblique roentgenogram of chest.

operation is less than 5 per cent, and operative results have been excellent in most patients. Patients with subvalvar or supra-valvar stenosis require special consideration.

Whereas adults with valvar aortic stenosis may remain asymptomatic for extended periods, development of syncope, angina pectoris, or congestive heart failure is ominous. Average life expectancy after appearance of these symptoms is about two and a half years. Careful evaluation is necessary, and surgical treatment should be considered. In young adults aortic commissurotomy alone may suffice. In older patients and in all those with extensive fibrosis and calcification, excision of the valve and prosthetic replacement are necessary.

Risk of operation is less than 10 per cent in patients in functional class III. Relief of symptoms and diminution of left ventricular hypertrophy may be expected. With few exceptions, mechanical function of the ball-valve prostheses currently used has remained good in patients observed for as long as four years after operation. Risk is higher in patients with more advanced disease, and especially in those with associated mitral valvar disease, pulmonary hypertension, or coronary arteriosclerosis, but notable improvement may oc-

cur. The greater risk must be weighed against the grave prognosis of continued nonoperative treatment. In all patients, continued careful medical treatment after operation is imperative. ★★★

1430 Tulane Avenue

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## PRACTICAL POLITICS

In an election year, it becomes apparent that there are only two kinds of voters:

- Those who support your candidate, and
- Those blind, prejudiced fools who don't.

# Radiologic Seminar LI: The Posterior Fat Pad Sign

JOSEPH C. GRIFFING, M.D.

Picayune, Mississippi

A SMALL FAT PAD nestled posteriorly in the olecranon fossa provides extremely valuable information about elbow injuries. This pad is not seen on x-rays of the normal elbow because it is hidden in the fossa. After elbow trauma, however, swelling causes protrusion of the fat and it is clearly shown on films. This radiolucency is known as the posterior fat pad sign.

There are three small fat collections adjacent to the distal humerus in normal subjects. Gray and other anatomists have described these fat masses as being intracapsular and extrasynovial. The largest fat pad lies deep in the olecranon fossa and when the elbow is flexed, this pad is pressed into the fossa by the triceps brachii. The other two pads occupy the shallow anterior coronoid and radial fossae, into which they are pressed by the brachialis during extension. We are only concerned with the olecranon fat mass, hence the designation: posterior fat pad sign.

High quality films show the two anterior fat pads routinely in the normal, uninjured elbow. The anterior pads have academic interest but no diagnostic significance. They serve best as a measure of film quality. Dark or light films may fail to reveal any of the fat pads and additional x-rays should be made of these cases.

Routine films of the elbow should include a straight AP, a true lateral in the 90° flexed position and an external oblique view to expose the radial head. Figure 1 shows the 90° flexion lateral position which best demonstrates the two anterior fat pads superimposed and the single posterior pad. All three are observed as faint radiolucencies near the humeral surface just above the joint.

The posterior fat pad becomes visible when the synovial sac is distended. Normally it lies deep in the olecranon fossa and is overshadowed by overlying bone. Trauma causes hydarthrosis or swelling of the synovial sac which bulges the olecranon

fat pad posteriorly. This is a distinctly abnormal finding and serves as a valuable clue of disease or injury. Fractures, dislocation, hydarthrosis, bursitis and rheumatoid arthritis may cause a positive posterior fat pad sign.

Due to a difference in x-ray absorption of fat, muscle and bone, the fat pads are easily recognized. Films should be made with a filtered x-ray beam and a cardboard cassette for maximum detail. Optimum exposure factors are mandatory. The technician must coax the patient to place the painful joint in proper position for the best views. All three views may be placed on a single 10 x 12 film by using lead masking. Figure 2 shows these three views with a positive posterior fat pad and a faint supracondylar fracture.

At least 5 inches of the distal humerus and 5 inches of the proximal forearm should be included on the films. A collimator is used to limit beam size and to enhance film detail. After viewing the initial films, additional projections may be made "around the clock." Occasionally, the fat pad sign is positive initially and an obscure, faint fracture will show on only one of six or seven exposures. In most cases the fat pad sign and its coexistent fracture are obvious.

When the posterior fat pad sign is present and all efforts fail to demonstrate a fracture in the injured elbow, a posterior splint should be applied. Experience has shown that healing callus will appear in two to four weeks. This is par-

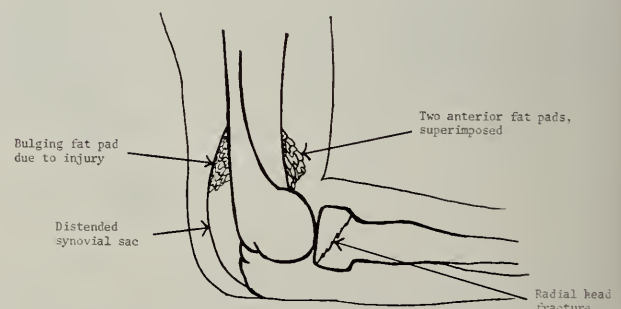


Figure 1. Line drawing of the elbow in the 90° flexed lateral position.

Sponsored by the Mississippi Radiological Society.  
From the Department of Radiology, L. O. Crosby Hospital.





Figure 2. Optimum exposures showing the posterior fat pad sign and a faint supracondylar fracture. A posterior splint was applied and repeat films

14 days later showed healing cortical bone reaction along the distal humeral shaft.

ticularly true in children. In the adult one must consider rheumatoid arthritis or bursitis as causes for the fat pad sign in the absence of fracture.

The fat pad sign is probably positive for only two to four days following injury. As hemorrhage and swelling subsides, the small fat mass returns to its hidden location in the olecranon fossa. Fortunately, most patients are x-rayed soon after injury, and there is no difficulty in showing the protruded fat. We have shown this sign with fractures of each of the three bones making up the elbow.

Traumatic rupture of the synovial membrane and articular capsule may permit fluid to escape and displacement of the fat pad may not occur. This is especially true with dislocations and severe soft tissue trauma.



Figure 3. Radiolucent posterior fat pad and radial head fracture.

The posterior fat pad sign has greatest use as a tip-off for obscure fractures, especially those involving the radial head. Figure 3 illustrates this clearly. The olecranon fat pad is present and a chip fracture of the radial head is barely visible. There is no reason to x-ray the opposite elbow "for comparison." Careful scrutiny and multiple views in various positions will solve the problem in the injured limb.

#### SUMMARY

Elbow fractures are common, disabling injuries. In 1954 the Swedes<sup>1</sup> described the posterior fat pad sign and this has proven to provide valuable information about diseases and fractures near the elbow.

After injury the olecranon fat pad protrudes posteriorly and is readily recognized on the straight lateral film in 90° flexion. Several diseases may cause a positive fat pad sign, but it has greatest use in detecting obscure, faint fractures. The sign is a warning, a red flag, that the elbow harbors serious pathology. ★★★

621 Stovall Ave.

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# What We Cannot Do Alone

EVERETT CRAWFORD, M.D.

Tylertown, Mississippi

IN 1954, an individual prominent in medical organization wrote these two brief paragraphs:

"It is not to be denied that medical society membership is intrinsically valuable to a physician, and I consider such values extremely important. In fact, it would be impossible to imagine the existence of a medical profession without its members being associated with one another in a guild relationship.

"The medical society, like any other institution, exists not for its own sake primarily but rather as an instrument through which its members are enabled to do certain things that they could not hope to do as individuals."

In the Mississippi State Medical Association, we have given this same thought a little embellishment in the Preamble to our Constitution with the words "That more may live longer in the richness and comfort of health . . ." But the only justification behind the 109 years of our association's history is our banding together to do jointly those things which we cannot alone do for ourselves. It's an oversimplification, to be sure, but it's true just the same.

A president of any considerable organization is tempted to rise to literary heights in a fireball valedictory, and some of my illustrious predecessors have made the grade. Rather, I want to confirm to you what I always knew, but what, in the

year of my service as your president has been my privilege to experience. This is the abbreviated story of what your state medical association is doing for you.

Most physicians attach high importance to their membership in the local society, the state medical

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*The state medical association is the sovereign voice of the physician as he identifies himself among his American colleagues, says the 1965-66 president in his address to the 98th Annual Session. The value of state association membership is assessed in terms of real and intangible values to the individual physician with a recounting of services and achievements.*

*The theme of the presidential address is banding together jointly in a scientific professional society to do together what a single physician cannot do alone.*

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association, and AMA. Perhaps they do so for one or many reasons among which are the warranty upon qualification, the fraternal relationship with fellow physicians, the measure of prestige, as a vehicle for service, or for postgraduate education opportunities. Some doctors seem to regard membership in the tri-level official structure of medical organization as a necessity of clinical life, and a few ignore it altogether.

But for whatever reason they join their medical societies, American physicians own and operate one of the most sophisticated and competent networks of organizations in the United States. Consider for a moment any comparably quantitative

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President, Mississippi State Medical Association, 1965-66.

Read before the House of Delegates, 98th Annual Session, Jackson, May 9-12, 1966.



field of endeavor consisting of less than 300,000 individuals in this nation, and take a hard look at what they possess in the way of a trade or professional organization. As a matter of fact, most groups several times our size have far less in association resources. Since this is hardly an accident or matter of involuntary evolution, there must be a pretty good reason.

## CONTINUING EDUCATION

Most obvious among these reasons is our unique need for continuing education. The vast array of knowledge in medicine—now too much for any single individual to learn and too great for any single institution to teach—must be disseminated, received, and assimilated. This, of course, is our first and most important job in medical organization, and few among us would suggest that it be otherwise.

Through medical organization at state and national levels, medicine has built a system of literature second to none through which it has been possible to catalog systematically this array of knowledge. Our own state association makes its contribution in this connection with our JOURNAL, but perhaps more importantly, we have a recognized and accredited forum through which to present our own essays and reports for permanent cataloging. We could not do this alone.

In our association of more than 1,400 members, we have a governing and working organization which includes one out of every six members. As we begin this annual session, 257 members hold elective and appointed posts in our association. There are 15 officers, nine Trustees, and 56 members of nine councils. We have 19 committees, both constitutional and *ad hoc*, all of which, with a single exception, are working partners with the Board of Trustees and the Council on Medical Service.

## COUNCIL COMMITTEES

This council has seven constitutional and one *ad hoc* committee with interests ranging from teaching programs through aging, occupational health, cancer control, federal medical services, maternal and child care, mental health, heart disease, blood banking, and disaster medical service. Over the course of an association year, it will conduct, through these various specialized organizational arms as many as 20 meetings and make various studies to keep pace with informational need.

The Board of Trustees has 10 committees, four constitutional and six *ad hoc*. In addition to house-

keeping and governing functions, the Board studies, develops, and sifts policy in its broad fields of responsibility. This year, the Board met eight times over nine days between annual sessions. Its committees were continually active.

This task force requires staff support, commanding more than half of the productivity of the Central Office. Here also are done those recurring tasks in overall association administration, membership, data gathering and processing, JOURNAL production, administration of a medical care plan, the work of organizing our annual session, and a host of service functions for officials, councils, committees, and component medical societies. These things we could not do alone.

It has been said that the state medical association is the sovereign voice of the American physician as he identifies himself among his American colleagues. His association speaks on legislative issues, actually sponsoring and encouraging enactment of these laws which are desired by the membership. Where legislative proposals are inimical to the public health and good medical service, sound reasons are advanced against their enactment.

## LEGISLATIVE COORDINATION

Most will agree that the measure of our legislative effectiveness should be qualitative and not on the scoreboard alone. The score is not nor ever will be perfect, but our achievements in this area continue to outweigh reversals. Let us remember that our total interest, understanding, and effort are always needed in legislative activities which must be carefully coordinated and conscientiously pursued.

But if we must—as I think we should not—measure our association in dollars and cents, then we have a yardstick with which to do it. In 1961, the basic \$5,000/\$15,000 professional liability premium for physicians (as distinguished from “surgeons” in the language of insurance) was \$56 per year. For those doing surgery, this minimum coverage, 5/15, cost \$134 per year. The trend in premium costs was then up.

Our association instituted a special professional liability insurance plan with a respected insurance company. We were told by some skeptics that not only would we fail but also that certain provisions of the contract might be unlawful. They aren’t saying that today.

During the past year, the coverage for physicians, again at the basic 5/15 level, was \$28 to \$35 and, for surgeons, \$68 to \$99. The former was down—an astonishing thing in this inflation-

## PRESIDENT'S ADDRESS / Crawford

ary era—50 per cent or \$28 per year. For surgeons, the price was down 49 per cent or \$66 per year. Multiply this basic premium by the excess limits factor to get the usual 100/300 premium, and you find that this one act of your state medical association has saved more than you pay in all your dues. This we could not have done alone.

A member of the Board of Trustees this year observed that he felt that his membership dues were among his best investments. He noted that for payment of local, state, and AMA dues he had more than a thousand people working for him at a price which would not employ a good secretary for two weeks. He pointed out that a dozen good magazines and journals were being published for him and that he had representation in councils of government, in the legislative halls, and in a thousand meetings every year where the interests of his profession were concerned.

Still another comparison was that the state med-

ical association cost the price of three packages of cigarettes a week. Another which has occurred to me is the cost of one football weekend.

But I emphasize that the money comparison is the wrong—or short—yardstick, because medical organization is a sort of platform stabilizing our professional lives. It is to be measured in terms of professional attainment, medical service, postgraduate education, and the projecting of our voices as the majority among us directs.

We have a valuable, near-priceless possession in our guild relationship, the professional society. We have versatility, capability, resource, and flexibility. There is a place for everybody's talent and time where its gift benefits many and the profession itself. Let us remember that our achievements are legion and that when we fail, we have failed together.

Give this good institution your time, talent, and substance in its second century of service. Amplify your own abilities by joining with your colleagues to do together what you cannot do alone.

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## SOLES TO SAVE

Just before graduation from medical school, the young student took a pair of shoes to the local cobbler to be half-soled. He was graduated, took his hospital training, and was inducted into the military service.

After discharge from the service, the doctor began his practice, raised a fine family, and became a respected member of the medical community. After 40 years, he made the decision to retire, sell his home and move to Florida.

As he and his wife were packing their personal belongings, they came across a claim check for a pair of shoes at the cobbler's for half-soles. Just for old times sake, the physician took the ticket to the shoe repair shop and presented the ticket to the elderly cobbler.

"This your ticket?" asked the cobbler.

"Yes," was the reply.

"These your shoes?" was the question as the old cobbler pointed to a dusty pair on the shelf.

"Yes, they are," said the old doctor.

"Okay, they'll be ready Friday."



# The Eosinophil: Its Significance

LEONARD C. HIGGINS, JR., M.D.

Jackson, Mississippi

BECAUSE RECENT DISCOVERIES have shed new light upon the physiologic and morphologic nature of the eosinophil, it is necessary to reappraise current knowledge of this cell. The eosinophil is a mature granulocyte measuring 8 to 16 microns in diameter. The nucleus is usually larger than that of the neutrophil and is usually bilobed. However, three lobes are not infrequently found. The nuclear segments are most often attached by a short fine filament and the cytoplasmic granules have an affinity for eosin which stains them a yellowish-red. The eosinophil is only slightly motile and slightly phagocytic.<sup>1, 2, 3</sup>

Wharton Jones discovered "the coarse granular corpuscle" in 1846 and Ehrlich, in 1878, found that the granules stained with eosin. In 1888 a method of direct counting in the wet chamber was first described, but it was not generally used until 1946. In 1895 Mesnil demonstrated the chemotactic and phagocytic properties of this cell.<sup>4, 5, 6</sup>

Eosinophils are produced in the bone marrow where they can first be identified as the eosinophilic myelocyte. They mature rapidly through the metamyelocyte and juvenile stages before being released into the peripheral circulation. The mechanism by which leukocytes enter the blood is not known, but it has been postulated that they reach the blood vessels by their own movements.<sup>1</sup> The mature eosinophil circulates in the peripheral blood for only 48 hours but has an estimated total life span of six days.<sup>5</sup> There is normally present a diurnal variation in the total number of circulating eosinophils. This change has been related to concomitant changes in the concentration of 17-hydroxysteroids in the plasma.<sup>7</sup> Others credited

this variation to the process of digestive leukocytosis, a phenomenon which still others have shown to be nonexistent.<sup>8</sup> The ultimate fate of the cell remains in question but Vaughn concluded that, after its short period of circulation in the blood, it finds its way to the mucosal cells of the bronchus or intestinal wall where (at least in the lung) it is eliminated from the body or picked up in the lymphatics and returned to the blood which carries it to the spleen where it is destroyed.<sup>6</sup>

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*The morphologic, histochemical and physiologic nature of the eosinophilic granulocyte is reviewed and recent advances in knowledge are summarized. The importance of this cell is emphasized and an approach to the clinical evaluation of eosinophilia is presented.*

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Normally the circulating eosinophils number 250-300/mm<sup>3</sup> or less.<sup>1, 8</sup> Total counts are most reliably done by a wet chamber technique such as that described by Pilot.<sup>9</sup> This stain is prepared by mixing 50 ml. propylene glycol, 40 ml. distilled water, 10 ml. 1 per cent phloxine in water and 1 ml. of 10 per cent sodium carbonate in water. After being filtered, this staining solution is stable at room temperature for about one month. The count is performed as follows: "Fill two ordinary leukocyte pipets to the 1 mark with blood. Fill to the 11 mark with stain. Shake for 30 seconds. Fill four chambers of the hemocytometers from each pipet and count all nine squares of each chamber." The total number of eosinophils per cubic millimeter is then calculated by multiplying the average number of cells per chamber by 11.1.<sup>9</sup> The value obtained by the percentage differential method

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From the Hematology Section, Department of Medicine, Veterans Administration Hospital.

## THE EOSINOPHIL / Higgins

done on the routine blood smear is considered unreliable because of variation in obtaining the sample and variation in random distribution of cells on the smear.<sup>10, 11</sup>

Eosinopenia has been reported following the administration of ephedrine, epinephrine, histamine and related amines, salicylic acid, para-amino-salicylic acid, casein, tyrosine, ACTH and glucocorticoids. It is also commonly seen following stress, after exposure to strong light and may be present during the early stages of acute infectious diseases.<sup>2, 12-16</sup> Little clinical emphasis, however, has been placed upon the degree of eosinopenia.

### ADRENAL CORTICAL TEST

In 1948, Thorn and his associates proposed that the eosinopenia resulting from the administration of purified pituitary adrenocorticotrophic hormone be used as a test for adrenal cortical reserve. Adequate adrenal cortical function was said to be present if there was "a decrease of 50 per cent or more in the circulating eosinophils" after the administration of ACTH.<sup>14</sup> The value of this test has since been discredited.<sup>8</sup> The mechanism of ACTH or glucocorticoid induced eosinopenia is not clearly understood but could be explained by one of the following possibilities: (a) the intravascular destruction of these cells by the hormone or one of its metabolites, (b) their temporary migration into tissues, (c) increased phagocytosis by the reticuloendothelial system, (d) a blocking of production and release from the marrow or (e) any combination of these possibilities.<sup>17, 18</sup> After extensive study, Essellier, Jeaneret and Morandi concluded that the eosinopenia resulted from a combination of increased destruction by the reticuloendothelial system and interference with release from the marrow. The degree of fall in the total eosinophil count was found to be influenced by the percentage of young cells present; that is, when the mature forms predominated the fall was greater.<sup>19</sup> The role of histamine in the production of steroid induced eosinopenia is defended by some while others have shown histamine to be eosinopoietic.<sup>17</sup>

### EOSINOPHIL ELEMENTS

The eosinophil is known to contain histamine and of the cellular blood elements, ranks second only to the basophil in histamine content. About one-third of the histamine content of normal blood is found in the eosinophils. Normal values are 1080 micrograms per one billion basophils and

160 micrograms per one billion eosinophils. The function of the histamine in the eosinophil remains obscure. Its concentration in chronic myelocytic leukemia is known to be elevated.<sup>20</sup>

The presence of trace metals in myeloid cells has been demonstrated by histochemical analysis. The eosinophil contains larger amounts of  $\text{Cu}^{++}$  and smaller amounts of  $\text{Zn}^{++}$  than does the neutrophil. Neutrophils and eosinophils contain some  $\text{Mg}^{++}$  and  $\text{Mn}^{++}$  but  $\text{Co}^{++}$  is present only in the eosinophil. Physiologic functions related to these trace metals are yet to be elucidated.<sup>21</sup>

The eosinophil has long been associated with allergic phenomena but the reason for its presence was not understood. Godlowski,<sup>22</sup> using antigenic extracts of eosinophils prepared from guinea pig peritoneal exudate and specifically sensitized uterine muscle, concluded that one of the functions of the eosinophil was the transportation of antigen. He emphasized that his findings did not prove this to be the principal or the only function of this cell. Others<sup>23</sup> have published experimental evidence confirming the hypothesis "that eosinophils react with antigens producing an enzymatic template which is later phagocytized by macrophages and utilized in the production of antibody by these cells." The presence of eosinophils is therefore clearly correlated with antibody formation. It has also been observed that the injection of cortisone reduces the degree of eosinophilia at the site of challenging injection as well as in the peripheral blood. Cortisone in large doses has been shown to inhibit the production of antibodies but has very little or no effect on the existing antibodies or on the antigen-antibody reaction.<sup>23</sup>

### BONE MARROW STUDIES

A study of the bone marrow of rats and guinea pigs with electron microscopic techniques revealed the granules of the eosinophil to possess a "truly extraordinary morphology."<sup>24</sup> Some of the granules were round and some were elliptical with a central dense area along the long axis. This dense material was thought to be a crystalloid solid lying within a vacuole which contained a less dense substance. The material within the dense dark area and that within the vacuole was homogeneous and without organized detail. Others have also noted the presence of two separate components in the eosinophilic granule.<sup>25</sup> When stained with Sudan black B, eosinophilic granules appear either solid black or as black rings with a central clear area indicating the lipoid nature of the cortical layer of the granule.<sup>26, 27</sup> The core of the granule is sudanophobic. Evidence supporting the protein nature of the core of the granule is



found when the genesis of the Charcot-Leyden crystal is observed.

Early studies suggested that Charcot-Leyden crystals were formed from the nucleus of the eosinophil but more recent observations indicate that the core of the granule is the material from which the crystals are derived.<sup>26, 28</sup> When examined electron microscopically, eosinophils, when exposed to Aerosol OT, undergo a series of changes. The cell wall partially disappears and the cytoplasmic granules swell. The altered granules coalesce and Charcot-Leyden crystals emerge. The internal appearance of the altered granules and the crystals are similar.

CRYSTAL ANALYSIS

Crystallographic analysis revealed Charcot-Leyden crystals to be colorless hexagonal dipyr- amids which are uniaxial and anisotropic. The an- isotropic property is lost when the specimen is dried or stained with acid fuchsin. Crystals aver- age about 21 microns in length but vary greatly in size. The crystals exhibit negative crystalline birefringence, are stainable with aqueous dyes, are not soluble in fat solvents, are sudanophobic and are denatured by drying; facts which support their protein nature. Additionally, chemical anal- ysis has shown them to be composed of a zinc containing polypeptide from which 14 different amino acids have been identified.<sup>29</sup>

Clinically these crystals may be found in the sputum of asthmatics, in the blood of leukemics, in areas of allergic inflammation containing eosin- ophils, in the blood and tissues of patients with polyarteritis nodosa and eosinophilic granuloma and in the stools of patients with amoebic dysen- tery.<sup>26, 28</sup>

Recently Barnhart and Riddle<sup>30</sup> published evi- dence localizing profibrinolysin (plasminogen)

within the eosinophil. It appears that profibrinol- ysin is actually synthesized in the immature eosino- philic granulocytes in the bone marrow where it increases in concentration as the cell matures. Profibrinolysin is then carried by these cells until needed in the blood or in the tissues where it ap- parently plays a part in maintaining fluidity of the blood and functions in clot lysis. This discov- ery adds hemostasis to the already established functions of transport and protection.

TABLE 2  
LESS COMMONLY ENCOUNTERED CAUSES  
OF EOSINOPHILIA<sup>1, 31, 32, 33, 34</sup>

1. Collagen diseases	Periarteritis nodosa
2. Malignant diseases	Hodgkin's disease, chronic my- elocytic and eosinophilic leuke- mia, mycosis fungoides, poly- cythemia vera, ovarian and other tumors
3. Parasitic infestation	Trichinosis, ecchinococcus
4. Familial anomaly	
5. Miscellaneous	Sarcoidosis, pernicious anemia, chlorpromazine therapy, erythe- ma multiforme, Addison's dis- ease, ulcerative colitis, eosino- philic granuloma, heparin ther- apy, post-irradiation, post-sple- nectomy, magnesium deficiency

The evaluation of a patient with eosinophilia is usually not difficult after adequate history and physical examination have been accomplished. Most often the etiologic factor will be found in one of the following categories: allergy, parasitic infestation, infectious disease or dermatitis (Table 1). Following the institution of specific therapeutic measures the eosinophilia abates.

DIFFICULT DIAGNOSES

In a small percentage of cases eosinophilia without obvious cause may be found. These fall into the category of "difficult diagnoses" (Table 2). In these cases perseverance on the part of the physician and the patient is imperative. The pa- tient must be evaluated by more detailed labora- tory procedures which may include: bone marrow aspiration, biopsy of skin, muscle, liver, bone or lymph node, Casoni skin test, drug sensitivity tests, Kveim test or thoracentesis. The information gained by these procedures may not always be diagnostic but may be beneficial in a negative sense. For example, the finding of eosinophils in pleural effusion fluid tends to rule out a diagnosis of tuberculosis, malignancy or fungal disease.<sup>35</sup> In this group it is not unusual, after exhaustive eval- uation, for the diagnosis to remain obscure. If

TABLE 1  
FREQUENTLY ENCOUNTERED CAUSES  
OF EOSINOPHILIA<sup>1, 31</sup>

1. Allergy	Hay fever, bronchial asthma, food allergies, angioneurotic edema and following injections of certain antibiotics
2. Parasitic Infestation	Hookworm, ascaris, strongy- loides
3. Infectious Diseases	Scarlet fever, rheumatic fever with chorea, and the conva- lescent stage of acute infections (short-lived)
4. Dermatitides	Psoriasis,eczema, dermatitis her- petiformis, scabies, pemphigus

## THE EOSINOPHIL / Higgins

carefully followed, however, the patients will eventually present signs and symptoms which will lead to a diagnosis or they will fall into the group whose eosinophilia clears and remain forever undiagnosed. Illustrative cases follow:

### CASE 1

J.C., a 43-year-old Negro male who was known to be hypertensive, was hospitalized in September 1964 with cough and exertional and paroxysmal dyspnea. Physical examination revealed a blood pressure of 150/100 mm. of mercury, bilateral inspiratory and expiratory rales and hepatomegaly but no cardiomegaly or edema. Diagnoses of congestive heart failure, hypertensive cardiovascular disease, chronic bronchitis and emphysema were made. An eosinophilia of 1000 per cubic millimeter was noted but no etiology was established.

Nine months later the patient was readmitted for treatment of intractable symptoms secondary to gastric ulcer. Biopsy of the gastric mucosa revealed adenocarcinoma. The eosinophilia, which at one time reached a level of 7300 per cubic millimeter in the peripheral blood and 20 per cent in the marrow, persisted until the time of his death. Because no other cause could be established clinically or by postmortem examination, the eosinophilia was attributed to the gastric malignancy.

### CASE 2

R.D., a 70-year-old Negro male, was hospitalized because of nocturia, low back pain, generalized weakness, and peripheral edema of three weeks' duration. He denied dyspnea. Physical examination revealed a blood pressure of 160/100 mm. of mercury, dullness over the right lower chest posteriorly where breath sounds were absent, cardiomegaly, a Grade II/VI localized apical systolic murmur, a right inguinal hernia, 2+ pitting edema of the lower extremities and an enlarged prostate. After complete evaluation, diagnoses of benign prostatic hypertrophy, essential hypertension with congestive heart failure and pleural effusion were made.

The laboratory data revealed an unexplained eosinophilia of 800-1000 per cubic millimeter. Because all the usual causes of eosinophilia had been "ruled out" a hematology consultation was requested. At the time of the original interview the patient denied any history of allergy, drug sensitivities, dermatitis, or food intolerance. Close

questioning, however, revealed that the patient did have hay fever manifested by "runny nose and itching eyes" during the summer months when working in his backyard garden. Thus, a careful review of systems using simple words rather than medical terms helped establish the etiology of this man's eosinophilia.

### CASE 3

P.W., a 28-year-old white male, presented with a "swelling" in the left axilla without associated chills, fever, night sweats, weight loss or anorexia. Past history and systems review were noncontributory. Physical examination revealed a shotty lymphadenopathy in posterior auricular, cervical, axillary, left epitrochlea and inguinal areas. The spleen was enlarged and palpable two centimeters below the left costal margin. No other pathological physical findings were noted.

Laboratory data showed a peripheral eosinophilia of 4400 per cubic millimeter in an otherwise normal hemogram and bone marrow aspiration was reported as "nonspecific" eosinophilia of 33 per cent. The combination of adenopathy, splenomegaly and eosinophilia in a young white male suggested a reticuloendothelial malignancy and an axillary lymph node biopsy did, indeed, verify the diagnosis of Hodgkin's disease. This patient was treated with oral Leukeran on a daily schedule and with intravenous nitrogen mustard on two occasions during the first two years of illness. Subsequently, oral Leukeran maintenance therapy has prevented recurrence of Hodgkin's activity and the eosinophilia has disappeared.

### CASE 4

L.P., a 31-year-old white male underwent submucous resection in February 1966 because of nasal obstruction of several years' duration. Subsequently, there developed a late afternoon cough productive of thick, whitish-yellow sputum. Wheezing, which had not been present formerly, developed and Grade I dyspnea was present. No other relevant symptoms were elicited. Physical examination, except for expiratory wheezes, was within normal limits. Initial hemogram revealed an eosinophilia of 600 per cubic millimeter in the presence of an otherwise normal count. Chest x-ray, bronchoscopy, muscle and lymph node biopsies were all normal. Sinus x-rays revealed clouding of the sinuses and thickening of the mucous membranes. Bronchograms showed "beading and attenuation suggestive of bronchitis and emphysema." Large numbers of eosinophils were present in the sputum when examined microscopically. The bone marrow was interpreted as



"nonspecific eosinophilia." Skin tests proved this patient to be sensitive to dust and mold.

During hospitalization there developed a pruritic maculopapular rash which was secondary to an antibiotic being used to treat the existing bronchitis. When the rash appeared, the total eosinophil count rose to 1750 per cubic millimeter but fell to pre-rash level when discontinuance of the antibiotic resulted in dermatologic clearing.

This case demonstrates eosinophilia associated with allergic bronchitis complicated by superimposed drug-induced eosinophilia.

## CASE 5

C.C., a 33-year-old white male was hospitalized for recurrent abdominal pain secondary to and typical of peptic ulcer disease. Except for mild epigastric tenderness and hyperactive bowel sounds, the physical examination was within normal limits. Admission urinalysis, hemogram and liver function studies were normal. Two days after admission a peripheral blood smear revealed morphologically atypical lymphocytes, and eosinophils, which were formerly absent, were now present. On this basis a hematology consultation was requested. Physical examination again was within normal limits; there was neither adenopathy nor organomegaly. On the fifth hospital day a bone marrow aspiration was performed. Lymphocytes numbered 9 per cent and were morphologically normal but an unexpected eosinophilia of 9 per cent was present (normal average—2 per cent).

Review of the clinical record established that the patient, on the day of admission, had developed severe but short-lived flushing of the skin and urticaria following the administration of histamine as part of a routine gastric analysis. The eosinophilia and the morphologic changes in the lymphocytes were therefore explained on the basis of drug reaction. ★★★

1500 East Woodrow Wilson Drive

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## HAPPY INUNDATION

Two vacationing businessmen met at Miami Beach. Said the first:

"I'm here on insurance money. I collected \$50,000 for a fire."

"Same with me," said the second. "I collected \$100,000 in flood damages."

After a thoughtful pause, the first asked, "Tell me, how do you start a flood?"



# Clinicopathological Conference LXXVIII

Mississippi Baptist Hospital  
Jackson, Mississippi

This 38-year-old, white female was apparently well until the summer of 1960. At that time she developed diarrhea, consisting of 10 to 12 loose bowel movements per day without blood or pus. She has had intermittent episodes of a similar nature since that time. On several occasions she was hospitalized in Oschner's Clinic in New Orleans.

In January 1961 she was begun on oral steroids and anti-diarrheal measures. Since her chest x-rays suggested old TB in the left upper lobe, she was started on INH as a protective measure while she was on steroid therapy. In August 1961 her barium enema revealed loss of haustration, straightening and narrowing of the entire colon and the terminal ileum. Rectal biopsy was performed. Surgery was advised, but the patient declined.

On Sept. 7, 1961, she was admitted to the University Hospital in Jackson with recurrent episodes of excruciating abdominal pain and diarrhea. WBC was 4,450, hematocrit was 32.5, and hemoglobin was 9.7. Urinalysis was negative. Blood electrolytes were normal. Stool examinations were negative for ova, parasites, and cysts. Fat stains showed occasional fat droplets. IVP was normal. Chest x-ray showed calcific densities in the left upper lung field. Barium enema on Sept. 11, 1961, showed loss of haustral markings, mucosal irregularity with shortening in the proximal and distal portions of the colon, as well as the terminal ileum.

She was treated with low residue diet, vitamins, Prednisolone 10 mg. t.i.d., Azulfidine 1 gm. q.i.d., and hydrocortisone enemas. The bowel movements diminished from eight to ten per day to two to three per day. She improved and was discharged home.

On May 27, 1964, she was readmitted to the University Hospital with perirectal abscess and fistula-in-ano. She was anemic with a hematocrit of 30 per cent. She received two blood transfusions and had incision and drainage of perirectal abscess and excision of fistula-in-ano under spinal anesthesia. Recovery was uneventful but diarrhea and abdominal cramping continued.

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*The patient in CPC LXXVIII is a 38-year-old white female with a four year history of recurrent episodes of excruciating abdominal pain and diarrhea. Discussers are Drs. H. Richard Johnson, W. Howard Cooper, III, and Louis Schiesari.*

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She was admitted to Baptist Hospital on Sept. 18, 1964, after a three months episode of protracted diarrhea, weight loss of 10 pounds and unbearable abdominal cramping. Hematocrit was 38 vol. per cent and hemoglobin was 12.3. Total protein was 6.50 gm. per cent, with 4.34 per cent albumin. Other blood and urine studies were normal. Upper GI series was normal.

Barium enema revealed extreme irritability of the colon with rapid flow of dye. There was marked narrowing of the right half of the colon and to a lesser degree on the left side. Transverse colon appeared to be free of disease. Proctoscopy revealed extensive inflammatory changes and excessive mucus formation with multiple superficial ulcerations. On Sept. 23, 1964, an abdominal operation was performed.

*Dr. H. Richard Johnson, Jr.:* "I believe this case represents classic ulcerative colitis, complicated

by malignant degeneration of the right colon. I would like to summarize the case with this in mind. This was a 34-year-old, white female at the onset of disease, at which time she developed diarrhea of 10 to 12 bowel movements per day. It was noted that these bowel movements were not bloody at this time and no further mention is given. This was in the summer of 1960. Six months later she was admitted, and apparently the diagnosis of ulcerative colitis was made at that time by the type of therapy she was started on.

### DIAGNOSTIC STUDIES

"In August 1961, approximately a year after onset of disease, her barium enema was noted to show a lot of characteristic changes of ulcerative colitis. Rectal biopsy was done, but we don't know the findings of that. Presumably, it did not alter the diagnosis since the therapy was not changed. Surgery was advised at that time, which is a little disturbing thinking of ulcerative colitis because I believe that most surgeons would not advise it this early in the disease.

"In September 1961, still about a year after onset of disease, she was hospitalized in the University Hospital here with anemia and negative stool examinations. Her chest x-ray showed no change at that time. Her barium enema was still characteristic of ulcerative colitis, and at that time she was started on a rather intensive program consisting of diet, vitamins, oral steroids, steroid enemas, and sulfa. Under this treatment, she apparently improved for some period of time; at least no hospitalization is recorded for the next two and a half years.

### SUBSEQUENT HOSPITALIZATION

"Apparently, she was next admitted at the University Hospital in May 1964, approximately four years after onset of disease. At this time she had a perirectal abscess and fistula-in-ano. She was again anemic with a hematocrit of 30, received two units of blood and I and D of the abscess. However, she continued diarrhea and cramping and was next admitted to Baptist Hospital some six months later with a three-month history of diarrhea, 10-pound weight loss, and unbearable cramping. She still was anemic, and an upper GI series was negative at that time. Barium enema showed extensive inflammation with extreme irritability of the colon, rapid flow of the dye."

*Dr. W. Howard Cooper, III:* "You can see that this is a distinctly diseased colon which has

marked involvement of the descending colon, with the sigmoid also involved (Figure 1). There are transverse fissures, ulceration, and loss of the normal mucosal pattern here. All the left colon is involved and then there is an abrupt change from abnormal to normal bowel near the splenic flexure with the transverse colon appearing normal with no loss of haustration and no ulceration. Again, there is an abrupt change to an abnormal area of bowel at the hepatic flexure and one side of the bowel wall appears more affected than does the opposite side. The right colon has a stricture formation with marked narrowing, and the terminal small bowel is not well seen here, but does not appear normal (Figure 2)."

*Dr. Johnson:* "Thank you, Dr. Cooper. She was carried to surgery on Sept. 23, 1964. Ulcerative colitis is a disease of unknown cause following a typical clinical course with the diagnosis usually being established by elimination of other causative agents. Its peak incidence is in females in the third decade of life, usually with abrupt onset. A triad of fever, bloody diarrhea, and weight loss is classically found. In the early phase, barium enema discloses saw-toothed serrations



Figure 1



along the bowel margins. Later, because of fibrosis and scarring the colon becomes shortened and tubular, with loss of haustrations. Pseudopolyp formation is frequently seen. Sigmoidoscopy early shows a friable edematous mucosa with superficial ulcerations.

"The exact incidence of malignant change is unknown, but it is reported in 1 to 35 per cent of patients with ulcerative colitis longstanding. These carcinomata tend to be anaplastic, frequently multiple and extensive, and to have a poor prognosis. Fistula-in-ano with perirectal abscesses commonly occur, and acute dilatation or perforation is not uncommon.

## DIFFERENTIAL DIAGNOSIS

"Amebiasis is to be considered in the differential diagnosis. This mimics both ulcerative colitis and carcinoma, and in this initial stage extensive ulcerations are produced especially in the right colon and in the rectum. Later, chronic colitis may progress to large amebomas which may be confused with cancer. Diagnosis of this disease is mainly on demonstration of ameba that are recovered from warm stool preparations or produced from the ulceration at time of sigmoidoscopy. Perforation, hemorrhage, and liver abscesses are the most common major complications.

"Proctoscopy shows an important point in differentiation. We don't really have this information but with amebic colitis, classically, you have normal-appearing mucosa between the ulcers, whereas this is not the case in ulcerative colitis. Because of the treatment given, amebic colitis was apparently not diagnosed in this particular patient preoperatively. However, the absence of involvement of the transverse colon in this particular patient leads one to consider this diagnosis a little bit more.

"Bacillary dysentery should also be considered. Occasionally in the subacute or chronic form this may be mistaken for ulcerative colitis. On sigmoidoscopy, ulcers may be seen along transverse ridges of the lower colon, later tending to coalesce and circle the bowel. Lack of this finding plus lack of bacteriologic demonstration of the organism tend to rule out this diagnosis.

## TUBERCULOSIS ENTEROCOLITIS

"Tuberculous enterocolitis is basically rare although it is not uncommon in patients with severe pulmonary tuberculosis. Usually a large inflammatory tumor is produced somewhere in the GI tract followed by observation of the mass or incomplete obstruction. The cecum is the usual site

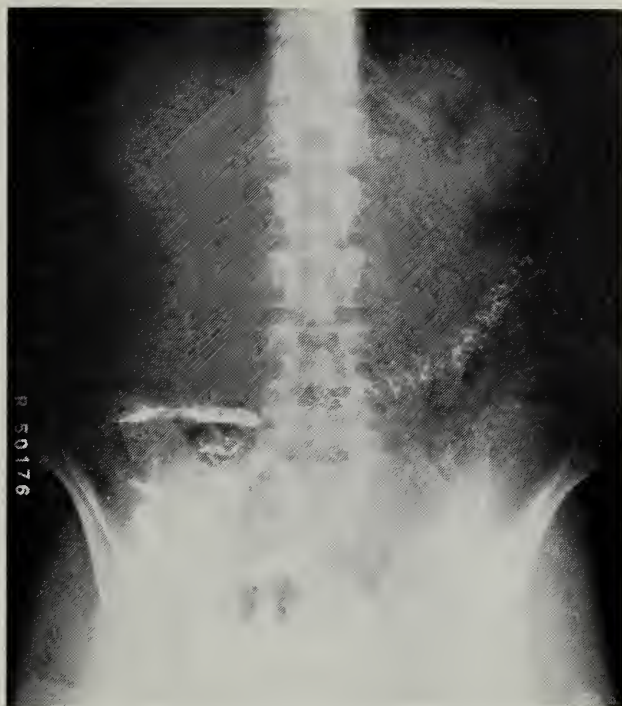


Figure 2

of disease. Tuberculous enterocolitis must be considered in this case in view of the chest x-ray and progression of the GI pathology while the patient was on steroid therapy. Actinomycosis should be mentioned in view of fistula formation although the extensiveness of this particular case, the location of the fistula, and the rarity of the disease itself make it highly unlikely.

## CROHN'S DISEASE

"A few words should be said in regard to non-specific regional enteritis (Crohn's disease). Usually there is an absence of lesions in the rectosigmoid area as distinguished from ulcerative colitis, although in occasional cases of regional enteritis with skip areas, ulcers have been found in the rectosigmoid. Some authorities consider ulcerative colitis and regional enteritis to be one and the same disease, however. They point out that several patients have had total colectomy for ulcerative colitis only to come back with 'ulcerative colitis' developing in their ileum of a severe enough degree to necessitate further surgery. Since it is part of the CPC game to stick one's neck out as far as possible, I'll say that this patient's diagnosis was ulcerative colitis with malignant degeneration in the right colon. The laparotomy was undertaken with the idea of performing a total colectomy and permanent ileostomy if the lesion was operable, which it probably was not."

## CPC / Continued

*Dr. J. Manning Hudson:* "Did you mean that granulomatous colitis is the same thing as ulcerative colitis?"

*Dr. Johnson:* "Some authorities consider regional enteritis to be one and the same disease as ulcerative colitis, only involving different areas. Skip areas are observed in both diseases with segments of small bowel involved in ulcerative colitis, and, conversely, segments of colon may be involved in Crohn's disease."

*Dr. Louis Schiesari:* "Before proceeding with the pathological findings Dr. Cooper is going to give us his diagnosis on this case."

## X-RAY FINDINGS

*Dr. Cooper:* "I think that the x-ray findings are typical of a disease other than ulcerative colitis, and I believe that this is a distinct entity, and regional enteritis and ulcerative colitis are not one and the same disease. Here, if you will look, you will see that there is tremendous involvement in the terminal ileum, in the first place; and on that basis, if you have involvement in the terminal ileum in ulcerative colitis it tends to be the so-called backwash ileitis, usually involving a short segment, and the segment is usually dilated with loss of normal mucosal markings. But there does not tend to be as diffuse stenosis, with involvement of all the bowel wall and separation of the loops as you see here.

"Another thing in the first film, if we can get it back up, is that this has one of the characteristic skip areas which is highly characteristic of granulomatous colitis. Now, granulomatous colitis can either be found as a distinct entity with no involvement of the small bowel, or more commonly is seen with small bowel involvement. I believe the Mt. Sinai Hospital in New York probably has one of the most extensive experiences with regional enteritis and ulcerative colitis. They had 1700 cases of regional enteritis, and they had 44 cases they reported, I believe, in which the colon was involved rather extensively, and in 7 of those there was no involvement of the small bowel, and in the others there was small bowel and colon involvement.

## ABNORMAL BOWEL

"Here comes the striking change from a perfectly normal-looking bowel to a definitely abnormal bowel with stricture formation at the hepatic flexure. On the other film, some longitudinal ulcerations are much more characteristic

of granulomatous colitis than of ulcerative colitis in my opinion. And, in fact, the only thing that isn't characteristic of granulomatous colitis in this particular case, I think, is the involvement of the rectosigmoid, as mentioned. So often the rectosigmoid is not involved in Crohn's disease."

*Question:* "Why couldn't this be ulcerative colitis with stricture formation?"

*Dr. Cooper:* "Well, there are a couple of other things; there is stricture formation here, though, on the right side of the colon. There is a universal involvement in ulcerative colitis and skip areas are not characteristic. The transverse colon is normal in this case and the terminal ileum is involved much more severely than I would anticipate with ulcerative colitis, and I believe those things might outweigh the other findings. That would be my opinion of it, anyway."

*Question:* "Would the lack of rectal hemorrhage be in favor of your diagnosis?"

*Dr. Cooper:* "Dr. Brock can answer that better than I can, but I think that characteristically it has been reported that profuse rectal bleeding is much less common in Crohn's disease than ulcerative colitis. Isn't that right, Dr. Brock?"

*Dr. Dewitt T. Brock, Jr.:* "That's correct."

## SPECIMEN DESCRIPTION

*Dr. Schiesari:* "The specimen consisted of the large intestine including the anus and about two feet of the terminal ileum. The wall of the distal 10 cm. of ileum and the wall of the cecum and ascending colon were thick and rigid. The mucosa was swollen, purplish-red, ulcerated, but between the ulcers a cobblestone pattern could be readily made out. Similarly involved, but to a lesser degree, was the descending colon and the sigmoid rectum. The transverse colon was intact. Had the extent of this type of damage in the two intestines been reversed, a diagnosis of Crohn's disease would have been obvious; but with such an extensive damage of the large intestine and only minimal involvement of the terminal ileum the diagnosis of ulcerative colitis with the so-called backwash participation of the terminal ileum had strongly to be considered, and, in fact, this was the admission diagnosis at the Baptist Hospital. Dr. Spell, who operated on this patient, tells me that this was also the discharge diagnosis from the Ochsner Clinic in New Orleans and the University Hospital in Jackson.

"The differential diagnosis, therefore, between the two entities rests with the microscopic examination. A section (Figure 3) from a grossly well-preserved proximal segment of ileum showed early changes consisting of massive lymphedema



of the submucosa with the overlying intact mucosal lining. A more advanced damage was seen in the sections from the grossly involved walls (Figure 4). Here, the intestinal wall was massively infiltrated by a mixture of plasma cells and monocytes, with the lymphocytes forming the

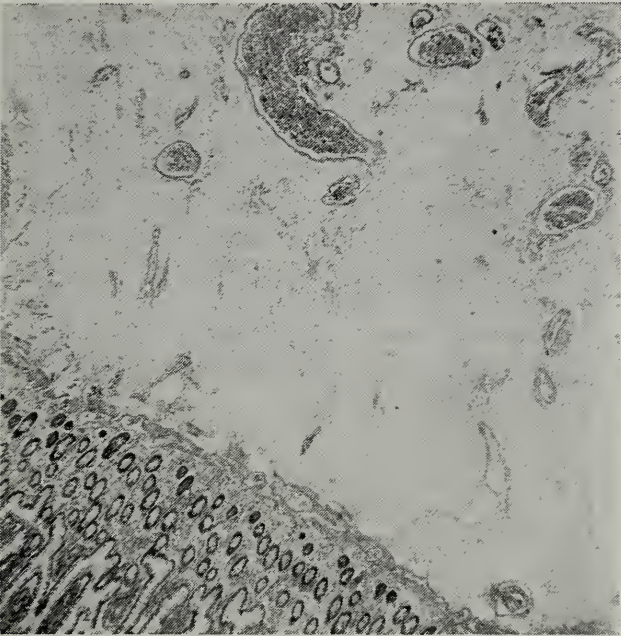


Figure 3

bulk of the inflammatory reaction. A few markedly enlarged lymphatic vessels literally plugged with lymphocytes were noted; the beginning formation of a granulomatous reaction is seen in the subserosa.

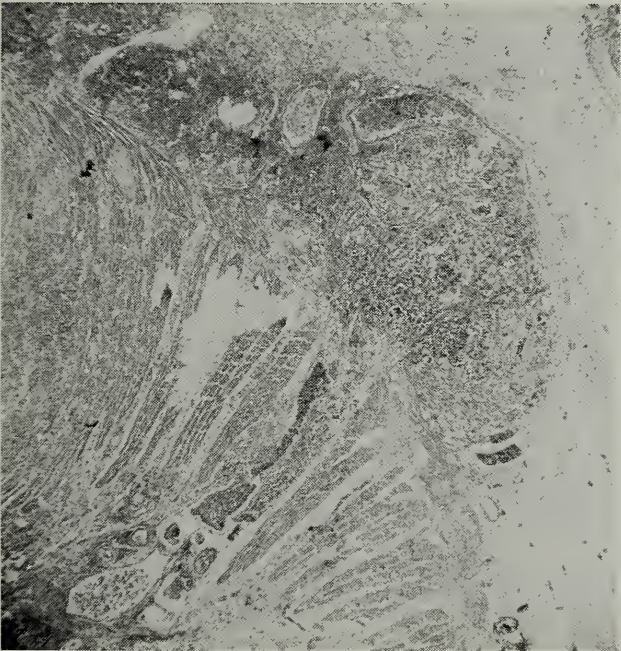


Figure 4

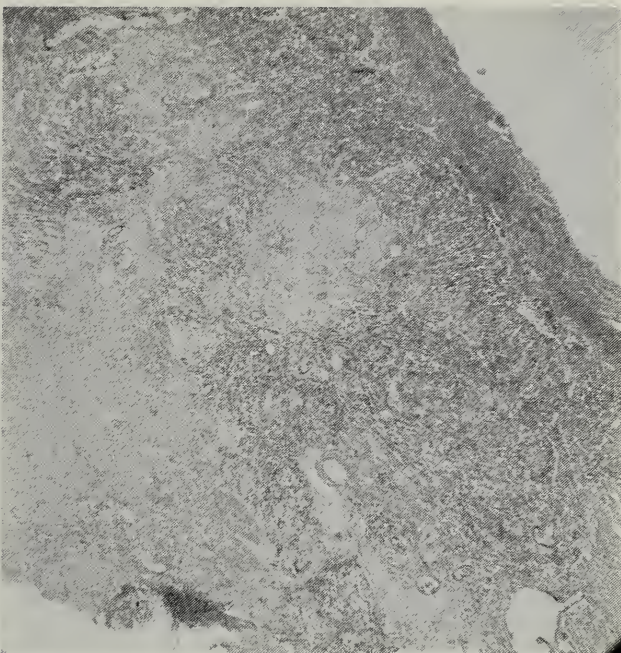


Figure 5

“As the disease progressed, in addition to the massive lymphomonocytic infiltration, there was also seen beginning sclerosis of the submucosa (Figure 5). Here, the lymphedema was being replaced by collagen; namely, we have here a



Figure 6



true elephantiasis of the intestinal wall. At a higher magnification (Figure 6), giant cell granulomas with giant cells rimmed by lymphocytes and epithelioid cells was evident. In summary, we have a progressive sclerosing granulomatous lymphangitis, the hallmark of Crohn's disease.

### GIANT CELL SYSTEMS

"When you read in the textbooks about this disease entity, undoubtedly you are impressed by the emphasis placed on the presence of the giant cell systems or sarcoid-like granulomas, and so much so that you may gain the impression that their presence is indispensable or a *sine qua non* for the diagnosis of Crohn's disease. This, of course, is not true. In fact, Dr. Crohn, himself, in his original publication in 1932 stated that only about 30 per cent of his cases presented such granulomatous reaction; other publications in the ensuing years, although with different percentages, confirmed his first observation.

"Therefore, the absence of this giant cell reaction should not induce the observer to make a diagnosis of ulcerative colitis which both grossly and microscopically is an entirely different affair. In ulcerative colitis, the lesion is superficial, exudative, and in continuity, and the wall tends to become thinner. On the other hand, in the Crohn's disease the lesion is in depth, productive, proliferative, and in the long run the walls become thicker with narrowing of the intestinal lumen.

"In order to avoid confusion in the terminology and to keep the two entities separated, it has been proposed, and quite rightly, to abandon such terms as right-sided colitis, segmental colitis, regional colitis, and to adopt the simple eponymous expression of Crohn's disease to indicate any segment of the gastrointestinal tract affected by this type of lesion. This new terminology is much more comprehensive since, as you know, Crohn's disease can affect any segment of the gastrointestinal tract from the esophagus to the anus.

### UNKNOWN ETIOLOGY

"The etiology of this mysterious disease is still unknown. As to the pathogenesis, it is generally accepted that this is a primary disease of the lymphatic system of the mesentery, and going a little further along this line some would find a connection between mesenteric lymphadenitis and the more chronic and extensive disease. Mesenteric lymphadenitis is given much more credit, so to speak, in the foreign medical literature. For

example, three popular books of pathology like Anderson's and Rubin's *General Pathology* and Ackerman's *Surgical Pathology* do not even mention the existence of the mesenteric lymphadenitis. I imagine that probably this stems from the fact that the pathologist very seldom, if ever, receives a mesenteric lymph node for examination when the surgeon explores the abdomen for a suspected appendicitis. The changes that we sometimes see in the appendix in cases of mesenteric lymphadenitis are pronounced enough to make a diagnosis of lymphoid hyperplasia. But not all pathologists are agreed upon this term and therefore there is still quite a bit of controversy on this point. This diagram (Figure 7.) has been taken from the *French Archives of Disease of Digestive Apparatus* and shows in the concept of the authors how lymphadenitis can progress finally to Crohn's disease.

### GRANULOMATOUS COLITIS

"During this discussion, granulomatous colitis has been mentioned. Granulomatous colitis should not be confused with Crohn's disease. It is a lesion which has been given more attention in recent years, and a good report on it is to be found in the September 1965 issue of *Surgery*. Here, this entity is described as having gross and clinical features different from the classical ulcerative colitis. Histologically there is the presence of non-caseating giant cell granulomas without, however, the sclerosing lymphangitis. In the final discussion they conclude that this is a somewhat different type of lesion which is probably to be placed in between ulcerative colitis and Crohn's disease.

"Before closing, I would like to bring to your attention a practical point on Crohn's disease. As

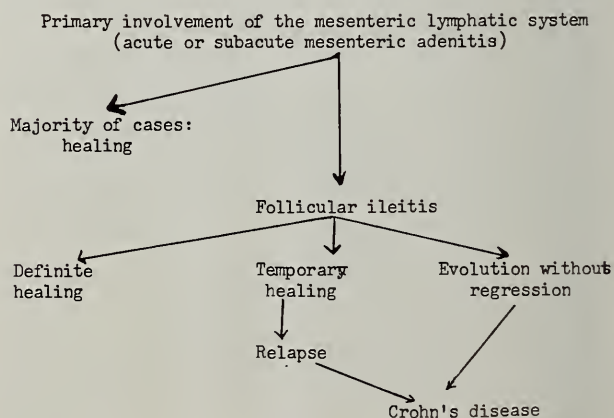


Figure 7



you see in the history, this patient was plagued with chronic anal lesions such as ulcers, fistulae, and abscesses. Fortunately the surgeon had the excellent idea to remove the anus along with the large intestine. If this radical surgery is not carried out and the surgeon leaves behind the anus with a portion of the rectum, the patient will continue to have recurrence of anal lesions for a long period of time and in some cases there will never be a complete healing. This problem has been very well discussed in a recent report from a London hospital that appeared in the November-December 1965 issue of *Disease of the Colon and Rectum*. The authors of this article also called attention to the fact that a large percentage of patients who for the first time go to the physician for anal lesions, which on microscopic examination show some kind of granulomatous reaction,

are found to develop Crohn's disease of the small intestine from one to five years later. And they state that as the disease progresses and the colon is involved, anal lesions are present in about 80 per cent of the cases. They conclude that if this type of anal lesions is present and at the same time the proctoscope reveals ulcerations in the rectum, the diagnosis of Crohn's disease can be made with certainty." ★★★

1190 North State St.

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## AN EYE FOR AN EYE

The proprietor of an automobile repair garage jumped with joy and yelled, "Hooray!"

"What gives?" asked a mechanic.

"Remember when my water pipes froze last winter? Well, the plumber who fixed them has just brought in his car for an overhaul!"



# The President Speaking

‘Who’ll Be Second?’

JAMES T. THOMPSON, M.D.

Moss Point, Mississippi

IT'S ELECTION YEAR, and the voice of the candidate is heard throughout the land. The tumult and shouting of the June primaries are behind, but unlike the politics of two decades ago, there will be more in November. Mississippi physicians have a stake in the elections, because a pronounced trend in federal health legislation is now the rule—not just the exception.

Back in 1962, American medicine took an inventory of its political savvy and knowhow and came up with interesting answers. They found, for example, that proponents of state medicine were well organized, well heeled as to finances, and alert to every Congressional election. The answer was AMPAC, the American Medical Political Action Committee, and the several state political action committees.

As provided for in law, political action committees are separate and apart from the groups who sponsor them. This is to say that a medical political action committee is totally separate from a medical society. It is a voluntary, nonprofit, unincorporated body which has as its purpose the promotion of good government, good men in public office, and good laws. As such, the PAC does not lobby or offer testimony; its interest is limited to electing good office holders. The matter of legislation is a proper concern for the formal organization, in this case, the medical society.

Our own Mississippi Medical Political Action Committee, active in 1964, has been reactivated. This summer, MPAC will solicit members from the ranks of the state medical association. As before, the minimum voluntary dues are nominal, just \$10 each for MPAC and AMPAC, a total of \$20. Enough such dues, however, can mean much in assisting conservative candidates for office and for assuring that solid citizens are elected.

Many physicians will not wait to receive the MPAC mailing; they will want to act now for good government by sending their 1966 dues in today. Mine are in the mail; who'll be second? ★★★



# Constitution and By-Laws of the Mississippi State Medical Association

## CONSTITUTION

### Preamble

That more may live longer in the richness and comfort of health; that pain, suffering, and disease may be eradicated to the extent made possible by scientific medical knowledge; that the standards of the medical profession may be maintained on the highest plane of honor, we dedicate ourselves as physicians through this Association. Among us, membership is a privilege, earned by professional qualification, personal honor, and selfless service; it is not a right vested superficially nor by statutory licensure. Truth shall be our quest; diligence, our staff; and service, our purpose.

### Article I

#### NAME OF THE ASSOCIATION

The name and title of this Association shall be the Mississippi State Medical Association.

### Article II

#### PURPOSE OF ORGANIZATION

The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Mississippi and to unite with similar associations in other states to form the American Medical Association, with a view toward the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws, to the promotion of friendly intercourse among the physicians and to guarding and fostering of their opinion in regard to the great problems of medicine, so that the profession shall become more honorable and capable within itself, and more useful to the public in the prevention and care of disease, and in the prolonging of and adding comfort to life.

The purpose of this Association shall be to promote scientific medical research and practice and it shall be a non-profit organization.

### Article III

#### COMPONENT SOCIETIES

Component Societies shall consist of those societies which hold charters from the Association.

### Article IV

#### MEMBERSHIP

Section 1. Members of the Mississippi State Medical Association. Members shall be active, associate, or emeritus, according to requirements and provisions of the By-Laws. There may also be invited guests. Membership other than associate shall be construed as active in connection with the rights and privileges accruing therefrom.

Section 2. Guests. Any physician not a resident of the state may become a guest during any annual session upon invitation of a member of the Association, and

shall be accorded the privilege of participating in all the scientific work of that session.

### Article V

#### SESSIONS AND MEETINGS

Section 1. The Association shall hold an annual session during which there shall be held daily not less than two general meetings, which shall be open to all registered members and guests.

Section 2. The time and place for holding the annual session shall be fixed by the House of Delegates, but in emergencies, the Board of Trustees shall have the power to fix, or change, either the time or the place, or both of the annual session.

### Article VI

#### GENERAL OFFICERS

Section 1. The general officers of this Association shall be a President, President-elect, three Vice-Presidents, one from each Supreme Court District, Secretary-Treasurer, Speaker, Vice Speaker, and Editor.

Section 2. The President, President-elect, and Vice-Presidents shall hold terms of one year. The Secretary-Treasurer, Speaker, Vice Speaker and Editor shall be elected for terms of three years.

Section 3. The officers of this Association shall be elected by the House of Delegates on the last day of the annual session following the adjournment of the general meeting, but no person shall be elected to any such office who has failed to attend two-thirds of the past two and current annual sessions and who has not been a member for the past two years.

Section 4. In addition to these general officers, there shall be an Executive Secretary who need not be a physician or member of the Association. He shall be appointed by the Board of Trustees and shall serve at the pleasure of the Association. His compensation and expenses for duties performed shall be fixed by the Board of Trustees and confirmed by the House of Delegates.

### Article VII

#### EXECUTIVE OR CENTRAL OFFICES

The Executive Secretary shall maintain in the city of Jackson suitable offices for the discharge of his duties and for conducting the administrative affairs of the Association.

### Article VIII

#### HOUSE OF DELEGATES

The House of Delegates shall be the legislative, business, and policy-making body of the Association and shall consist of (1) delegates selected by the component societies under authorized apportionment, (2) the general officers of the Association, (3) all past presidents, provided they still be members in good standing of the Association, (4) members of the Board of Trustees and Councils, and (5) elected committees. Delegates and Alternate Delegates to the American Medical Association, members of the State Board of Health, and members of the Board of Trustees of Mental Institutions, all of whom must be members of this Association.



# CONSTITUTION / Continued

## Article IX BOARD OF TRUSTEES

The Board of Trustees shall be the executive and governing body of the Association during vacation of the House of Delegates and shall perform such duties as are prescribed by law governing directors of corporations and in the By-Laws of the Association. The Board shall consist of nine members, one from each Association District, elected for terms of three years each. A Trustee shall not serve more than three consecutive terms.

## Article X FUNDS AND EXPENSES

Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by annual dues, per capita assessments upon the membership, and by voluntary contributions. Funds may be appropriated by the House of Delegates to defray the expenses of the annual session, publications, and for any other purpose approved by the House of Delegates.

## Article XI THE SEAL

The Association shall have a common Seal with power to break, change or renew the same at pleasure.

## Article XII AMENDMENTS

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at the annual session, provided that such amendment shall have been presented in open meeting at the previous annual session, and that it shall have been sent officially to each component society at least two months before the session at which final action is taken.

## BY-LAWS

### Chapter I MEMBERSHIP

Section 1. Eligibility. Each component society of the Mississippi State Medical Association shall judge the qualifications of candidates for election to membership therein, which shall be restricted to those persons who hold the degree of Doctor of Medicine from an appropriately accredited source as defined by the American Medical Association, or in lieu thereof, a foreign degree in medicine which is an acceptable equivalent to the Board of Trustees and shall be a citizen of the United States. All candidates for any degree of membership other than associate must be legally licensed to practice medicine in Mississippi. Persons who obtained this degree prior to January 1, 1917, need not comply with this requirement but must be licensed to practice medicine in Mississippi or, if offering to practice in Mississippi must be eligible for license by reciprocity and be a member in good standing of a constituent (state) association of the American Medical Association. Membership in a component society, evidenced by the payment of dues for the current year, shall be a prerequisite to membership in the Association, except that a physician upon his initial application for membership in a component society of the Association shall be required to undergo a waiting period of ninety (90) consecutive days from the date he begins the practice of medicine in the geographical area of the component society before he may be elected to membership in the component

society. No physician shall be eligible for membership who has been convicted of or who has plead guilty to either a felony or a violation of a state or federal narcotics law. The duly certified court record shall be *prima facie* evidence of pleas and convictions and cause automatic revocation of membership. No physician shall be eligible for election to or continuation of membership who does not possess a currently effective federal narcotics stamp, provided, however, that physicians in full time government service who need no registration to use, prescribe, and dispense narcotic drugs and those who, by reason of type of practice, employment, inactivity, or retirement, neither prescribe nor dispense narcotics and who for this reason alone have not applied for registration shall be exempt from this requirement.

Section 2 (a). Good Standing. Only those members in good standing shall be entitled to the rights and privileges of membership. A physician not in good standing may not be elected to office nor exercise the privilege of voting or attending any session of this Association, scientific or otherwise. The name of a physician upon the properly certified roster of a component society which has paid its annual assessment shall be *prima facie* evidence of his right to register at the annual session of the Mississippi State Medical Association. No member shall participate in any of the proceedings of the annual session until he is duly registered. No delegate or other member shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section. (b) Change of State Residence. In the event that a member moves from the State, his membership shall continue until, and lapse at the end of, the current fiscal year, but this provision shall not operate to prevent a physician who moves from the state continuing his membership by payment of all dues and assessments to the state Association. (c) Obligations of Membership. When the Executive Secretary of the Mississippi State Medical Association is officially informed by the secretary of a component society that a physician is not in good standing in the component society, he shall remove the name of the physician from the rolls of the Association. A member shall hold his membership through the component society in the jurisdiction of which he practices, provided that a physician living on or near a county line may hold membership in the society most convenient for him to attend. If the society in which he chooses to secure membership does not exercise jurisdiction over the area of his residence, then permission must be obtained from the jurisdiction society to facilitate his affiliation with the extra-jurisdiction society.

Section 3. Degrees of Membership. Members of the Mississippi State Medical Association shall be divided into the following classifications: Active, emeritus, and associate. (a) Active Membership. Active members shall include all eligible members of component societies in good standing, providing that all dues and assessments in this Association as may be hereinafter prescribed have been received by the Association. (b) Emeritus Members. Any members of the Mississippi State Medical Association who has been an active member for any ten consecutive years and shall have permanently retired from the practice of medicine shall be eligible for election to emeritus membership. Election to emeritus membership for reason of retirement in the case of permanent and total disability shall merit special consideration but shall be subject to ruling by the Board of Trustees. Election to emeritus membership shall be based on the recommendation of the component society and the approval of the Board of Trustees. (c) Associate Membership. Any commissioned medical officer in the United States Army, United States Air Force, United States Navy, or United States Public Health Service, or any physician in the employ of the Veterans Administration, not licensed to practice in the State of Mississippi, stationed in Mississippi, members of medical faculties of medical schools in Mississippi, approved by



the American Medical Association, who are not licensed to practice in the state, any hospital intern, or any hospital resident in Mississippi, may, on election to associate membership by the component society in whose jurisdiction the physician resides become an associate of the Mississippi State Medical Association. Associate members shall not vote or hold office.

**Section 4. Dues and Assessments.** A per capita assessment determined by the House of Delegates shall constitute the dues of the Association, which assessment shall be collected from all active members by the respective secretaries of the component societies, provided that new members shall be accepted on payment of three-fourths of annual dues after May 1 and one-half of annual dues after September 1. Each active member shall pay the prescribed dues to the officer designated by the component society for transmittal to the Executive Secretary of the Association. Dues shall include a subscription to the official publication of the Association. (a) **Members Excused From Payment.** The Board of Trustees may, by majority vote, excuse a member from payment of dues because of undue hardship or similar circumstances warranting special consideration provided that the component society shall have excused in full the payment of dues for periods exceeding one year. Such circumstances shall be interpreted to include extended illness and temporary disability. (b) **Emeritus Members.** Physicians who have been elected emeritus members shall not be required to pay dues in the Association. (c) **Payment of Dues and Delinquency.** Dues of the Association are due and payable on December 31 of the year prior to that for which dues are prescribed. Failure to pay dues by April 1 of the year for which due shall result in forfeiture of membership privileges and the removal of the member's name from the rolls of the Association. A five dollar (\$5.00) reinstatement cost shall be assessed against any member who is delinquent by reason of non-payment of dues after April 1 of the year for which dues are payable. A member in good standing who is called to active duty with the Armed Forces of the United States other than in the regular component shall be carried as an active member without payment of dues until such time as he is released from military service; receipt of publications of the Association during such period shall be at the expense of the member.

**Section 5. American Medical Association.** Members of this Association shall pay the dues or hold a legal exemption from the dues of the American Medical Association. These dues shall be paid through the component society to the Executive Secretary of the Mississippi State Medical Association, whose duty it shall be to transmit them to the American Medical Association and to obtain proper credits and receipts therefor.

**Section 6. Revocation of Emeritus or Associate Membership.** Any emeritus or associate membership may be revoked by two-thirds vote of the House of Delegates when, in the opinion of the House of Delegates, the conduct or actions of the emeritus or associate member violates any of the principles of the code of ethics or whose conduct or actions are not becoming to the honor conferred.

## Chapter II ANNUAL AND SPECIAL SESSIONS

**Section 1. Time and Place.** An annual session shall be held as required by Article V, Section 1, the Constitution of the Mississippi State Medical Association, which session shall in any event be held prior to the annual session of the American Medical Association. The place of the state session shall be fixed in accordance with Article V, Section 2, the Constitution of the Mississippi State Medical Association.

**Section 2. Special Session.** A special session of the Association or of the House of Delegates may be called by the President, with the approval of the Board of Trustees. The Board of Trustees is empow-

ered to call a special session by majority concurrence.

**Section 3. Inviting an Annual Session.** A component society desiring the Association and House of Delegates to meet in annual session in a city within its jurisdiction may submit an invitation in writing or verbally through its representative to the House of Delegates at the annual session concerned with the selection of the site for the next regular scheduled meeting. The dates and site of the annual session selected may be changed by majority vote of the Board of Trustees in an emergency requiring such a change.

**Section 4. Registration Privileges.** Only the following shall be permitted to register at any session:

- (a) Active members
- (b) Emeritus members
- (c) Associate members
- (d) Invited guests
- (e) Medical students of American Medical Association approved medical schools who are certified to the Executive Secretary of the Association by their respective deans.
- (f) Interns and residents who are graduates of American Medical Association approved medical schools and who are connected with an approved hospital and who are certified to the Executive Secretary of the Association by their respective hospital superintendents in event they are not associate members of the Association.
- (g) Commissioned medical officers of the United States Armed Forces who are on active duty and who if not associate members are certified to the Executive Secretary by their Post or Base Surgeons or Commanding Officers.

**Section 5. Indebtedness.** A member shall not be permitted to register unless all current indebtedness to both the Association and component of proper jurisdiction has been paid.

**Section 6. Admittance.** Admittance to any meeting of the House of Delegates, any scientific section, or any of the various exhibits at an annual session of the Association shall be limited to members in good standing, duly registered and invited guests, members in good standing of the Woman's Auxiliary to the Mississippi State Medical Association, duly accredited and registered members of the Press, and accredited technical and scientific exhibitors.

## Chapter III GENERAL MEETING

**Section 1. Participation.** The general meeting shall include all registered members and guests, who shall have equal rights to participate in the proceedings and discussions, but no member shall vote on any question coming before a section of the general meeting except those who have registered as members of such sections. Each section of the general meeting shall be presided over by its chairman. The address of the President and the Distinguished Service Oration shall be delivered before the general meeting at such time and place as may be arranged.

**Section 2. Order.** The order of exercise, papers, and discussions as set forth in the official program shall be followed from day to day until it has been completed. But no section shall be allowed to place more than five papers on its program, nor more than two invited guest essayists (out-of-state or non-member). When a section program is not completed within the time assigned, it shall not be allowed to continue into that assigned to another section.

**Section 3. Time Restrictions.** No address or paper before the Association, except those of the President and Orator, shall occupy more than twenty minutes in its delivery, except that guests may be allowed thirty minutes; and in formal discussion no one shall speak more than five minutes; and in informal discussion no one shall speak more than three minutes and not more than one time.



## BY-LAWS / Continued

Section 4. Essayists. With the exception of the invited guests, the essayists must be members of the Association. No name shall appear more than once on the printed program to discuss a paper before the regular scientific sections unless such person qualifies for membership as provided in these By-Laws.

Section 5. Papers. All papers read before the Association shall be its property. Each paper must be read by its author, and must be deposited with the Secretary when read.

Section 6. Failure to Read Paper. No author listed on the program who fails to read a paper at the session may be allowed a place on the program of the next annual session, but if the author, being unable to attend, shows his good intent by forwarding his paper to the Secretary before the annual session, he shall not suffer the penalty.

### Chapter IV SCIENTIFIC SECTIONS

Section 1. Designation of Sections. The scientific sections of the Association shall be as follows: (a) Section on Medicine, (b) Section on Surgery, (c) Section on Preventive Medicine, (d) Section on Eye, Ear, Nose and Throat, (e) Section on Pediatrics, (f) Section on Obstetrics and Gynecology, and (g) Section on General Practice.

Section 2. Section Officers. Each scientific section of the Association shall, as the last order of business during its regular meeting, elect a chairman who shall serve for a period of one year. A majority of votes cast shall be necessary to elect. Additionally, each section shall elect a secretary whose term of office shall be for a period of three years and so arranged that secretaries shall be elected by their respective sections at the same annual meeting as follows: (1) Sections on General Practice and EENT, (2) Sections on Obstetrics and Gynecology and Preventive Medicine, and (3) Sections on Pediatrics, Surgery, and Medicine.

Section 3. Program. The Council on Scientific Assembly shall place any paper in its proper section. The Council shall so arrange the program that no one section shall be given precedence over others two years in succession.

### Chapter V HOUSE OF DELEGATES

Section 1. Apportionment and Representation. Each organized county shall be entitled to representation in all regular and special sessions of the House of Delegates, one delegate and one alternate for each fifty members in the county and one delegate and one alternate for each fraction thereof, but each organized county holding a charter from this organization having made its annual report and paid its assessments, as provided in this Constitution and By-Laws shall be entitled to at least one delegate and alternate, said alternate delegates to act only in the absence of the delegate or delegates from the respective counties. No county in a component society shall be without representation in the House of Delegates; each shall be entitled to one delegate and one alternate without regard to total membership. No alternate may be seated at any regular or special session of the House of Delegates unless the delegates elected from that county shall be absent or otherwise unable to participate in the proceedings. In the event that neither the delegate nor the alternate is able to attend the regular or special session to which they have been accredited, then any *bona fide* resident of the county may, if properly registered, qualify himself as a delegate. No representative of the component society shall be seated in the House of Delegates until all his dues, assessments, and obligations to the component society have been paid. Delegates and alternates shall be elected by their re-

spective component societies for terms of not less than two years and shall assume office on the first day of the annual session following their elections; they shall be *bona fide* residents of the counties which they represent. Their names shall be reported to the Central Office of the Association not later than thirty days prior to the first day of the annual session. Representatives of component societies shall be seated in the House of Delegates only following their proper registration of credentials from the component societies they represent.

Section 2. Meetings and Attendance. The House of Delegates shall meet annually on the first day of the annual session of the Association. The House of Delegates shall meet for the conclusion of business on the last day of the annual session immediately following the adjournment of the last general or scientific session, provided that these requirements shall not operate to prevent such other meetings of the House of Delegates during the annual session as the House itself may order or the President or Speaker may deem necessary, but no such meetings may be called at times which would conflict with the scheduled general or scientific session. Duly registered members and guests may attend all meetings of the House of Delegates provided that they occupy a distinctly separate section of the meeting hall or auditorium and further provided that they shall not be permitted to participate in any phase of the meeting of the House of Delegates except on invitation of that body. By majority vote, the House of Delegates may enter into executive session, during which time only qualified delegates and officers of the Association may remain in attendance.

Section 3. Quorum. A three-fifths majority of registered and duly seated delegates of this Association shall constitute a quorum.

Section 4. Order of Business. The order of business shall be conducted at the pleasure of the House of Delegates, provided it shall not be in conflict with either these By-Laws or the Constitution. Meetings shall be conducted according to *Robert's Rules of Order, Revised*, and within the bounds of courtesy and this Constitution and By-Laws. Generally, the order of business shall be:

- (1) Adoption of the Transactions of the previous meeting.
- (2) Reports of Boards, Councils and Committees.
- (3) Reports of Presidential Committees.
- (4) Special Orders.
- (5) Unfinished Business.
- (6) New Business.

Section 5. Memorials and Resolutions. No memorials or resolutions shall at any time be issued in the name of the Mississippi State Medical Association by any officer or member thereof until such memorial or resolution has been approved and adopted by the House of Delegates or Board of Trustees.

Section 6. Duties and Responsibilities. It shall, through its officers and otherwise, give diligent attention to foster the scientific work and spirit of the Association, and shall constantly study and strive to make each annual session a stepping stone to future ones of higher interest. It shall consider and advise the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation and to diffuse popular information in relation thereto. It shall make careful inquiry into the condition of the profession of each county in the state, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in the counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality, and shall continue these efforts until every physician in every county in the state has been brought under medical society influence. It shall encourage postgraduate work in medical centers, as well as home study



and research, and shall endeavor to have the results utilized and intelligently discussed in the component societies. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body, the term of office to begin on January 1 of the year following that of the elections and continuing for two successive years. It shall, upon recommendation of the Board of Trustees, provide and issue charters to counties organized to conform to the spirit of the Constitution and By-Laws.

Section 7. Reference Committees. Business brought before the House of Delegates will normally be referred by the Speaker for hearing, debate, and recommendation to a reference committee. Sufficient reference committees shall be appointed by the President to expedite and assist in the deliberations of the House of Delegates. Such committees shall consist of not less than three nor more than five members, all of whom shall be members of the House of Delegates, who shall serve only during the regular or special session for which appointed. Any member of the Association shall have the privilege of appearing before a reference committee on any issue being considered. Additionally, reference committees may permit the appearance of any individual who, in the opinion of the committee, can assist its deliberations.

## Chapter VI ELECTION OF OFFICERS

Section 1. Ballot. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect.

Section 2. Nominations. The House of Delegates on the first day of the annual session shall select a Committee on Nominations consisting of nine members of the House of Delegates, one from each Association District. It shall be the duty of this committee to consult with the members of the Association and to hold one or more meetings at which the best interests of the Association and of the profession of the state for the ensuing year shall be carefully considered. The committee shall nominate to the House of Delegates three names for each general officer vacancy and two names for all other offices. No two candidates for President-elect may be named from the same county. Nominations for appointment to membership on the Mississippi State Board of Health shall be made by the House of Delegates in accordance with Section 7024, Mississippi Code of 1942, provided that six names shall be submitted, three of whom shall be elected and their names submitted to the Governor as nominees from each district, provided no member shall be nominated who has served two consecutive terms. The House of Delegates shall nominate five physicians when vacancies occur on the Board of Trustees of Mental Institutions which nominations shall be submitted to the Governor in accordance with law.

Section 3. Report of Nominations. The House of Delegates shall receive the report of the Committee on Nominations and elect officers, Trustees, and Council members on the last day of the annual session.

Section 4. Nominations from the Floor. Nothing in this Chapter shall be construed to prevent additional nominations being made from the floor by members of the House of Delegates.

Section 5. Executive Secretary. The Board of Trustees shall select and appoint an Executive Secretary as elsewhere prescribed in the Constitution and By-Laws of the Association.

## Chapter VII DUTIES OF OFFICERS

Section 1. President. The President shall have general supervision over all meetings of the various bodies of the Association, shall appoint all committees not otherwise provided for, shall deliver an annual address at such time and place as may be arranged, and shall perform

such other duties as custom and parliamentary usage may require. He shall fill by appointment all vacancies occurring during his tenure of office among the general officers and on the Board of Trustees and Councils and shall be empowered to appoint such committees on an *ad hoc* basis as may be desired or required to conduct the affairs of the Association. He shall be an *ex officio* member of all Councils and committees. He shall be the real and acknowledged head, as well as the personal representative, of the medical profession of the State of Mississippi during his term of office, and insofar as practicable, shall visit by appointment the various sections of the state and the component societies of the Mississippi State Medical Association and assist the Trustees in their tasks of aiding and strengthening the component societies and in making their work more useful.

Section 2. President-elect. The President-elect shall be in charge of the work of organization, including membership, under the direction of the President, and shall exercise these duties and advise with the Vice Presidents and with the Board of Trustees in this phase of their activity. He shall be an *ex-officio* member of all Councils and committees. He shall succeed to the presidency upon the event of the death, resignation, or removal from office of the President. This automatic succession shall not operate to disqualify him from serving the next regular term of office unless he has served more than six months as President.

Section 3. Vice Presidents. The Vice Presidents shall assist the President in the discharge of his duties. They shall further assist the President-elect in the work of organization, including membership in their respective areas, and in promoting the welfare of the Association and the profession of the state.

Section 4. Speaker. A Speaker shall be elected for a term of three years. This officer may be chosen from the membership of the Association, irrespective of any affiliation with the House. The Speaker shall familiarize himself with the rules and usages of parliamentary procedure, with the laws of the House. On him shall devolve the duty of bringing before the House through the various officers and chairmen all reports and other matters that are to receive its attention. He shall preside at all meetings of the House and perform the duties usual to the position and office of chairman except in the appointment of committees, which shall be the privilege of the President.

Section 5. Vice Speaker. A Vice Speaker shall be elected for a term of three years to run concurrently with that of the Speaker. The Vice Speaker shall assist the Speaker in all duties prescribed in these By-Laws.

Section 6. Secretary-Treasurer. The Secretary-Treasurer shall be elected for a term of three years. He shall perform such duties ordinarily devolving on a secretary of a corporation by law, custom, or parliamentary usage and shall enjoy the rights and perform such other duties as may be granted or imposed in the Constitution and these By-Laws. He may delegate such duties as are herein described to the Executive Secretary who shall be responsible therefor. He shall be an *ex-officio* member of all Councils and committees.

Section 7. Executive Secretary. The Executive Secretary shall be appointed by the Board of Trustees and shall serve at the pleasure of the Association. He need not be a member of the Association nor a physician. He shall maintain a Central Office for the Association and shall be responsible for the management and proper functioning of the Central Office to the President of the Association and the Board of Trustees. He shall attend all sessions and meetings of the Association, the House of Delegates, the Board of Trustees, and shall serve at all times to perform such other duties as may be deemed beneficial to the Association by the President and Board of Trustees. He shall assist elected officers, Councils, committees, and Trustees in the performance of their duties. Under instructions from the President, he shall conduct a comprehensive program of public education and all such



## BY-LAWS / Continued

other activities as may disclose favorably to the public at large the aims, objectives, and goals of service of the medical profession in Mississippi. He shall, when requested, place himself in position to assist any of the component societies of the Association and he shall attend meetings of the component societies when invited by officers thereof. He shall be made custodian of records, books and papers belonging to the Association and he shall keep account of and promptly place under the supervision of the Secretary-Treasurer such funds as may be delivered into his hands in the name of the Association. He shall give bond at the expense of the Association in such amount as may be required. He shall provide for the registration of the members and delegates at the annual session and cooperate in preparing for and arranging all functions of the Association, including the annual session. He shall procure an exact transcript of all proceedings of the House of Delegates. He shall maintain a register of all legal practitioners in Mississippi and he shall maintain detailed and exact records of the membership with regard to component societies, the Mississippi State Medical Association, and the American Medical Association. He shall issue evidence of membership to each physician who pays the annual assessment and is accepted in the Mississippi State Medical Association. He shall maintain close and complete liaison with the American Medical Association and shall keep the component societies informed of activities, programs, and mandates of both the state Association and the American Medical Association. He shall publish from the Central Office such memoranda, bulletins, and miscellaneous publications as may be directed by the President, the Board of Trustees, and the House of Delegates. He shall conduct the official correspondence of the Association as he may be directed. He shall employ such assistants as may be required, upon authorization of the Board of Trustees. He shall supply each component society with blank forms to be used in connection with membership and reports. He shall maintain records of monies paid by the component societies for assessments and dues. He shall prepare and publish under the direction of the President and Board of Trustees such programs as may be necessary for official functions of the Association. He shall be reimbursed for expenses incurred in the performance of his duties, separately and in addition to his regular compensation.

### Chapter VIII

#### BOARD OF TRUSTEES

Section 1. Board of Trustees. The Board of Trustees shall be the executive and governing body of the Association during vacation of the House of Delegates. It shall consist of nine members, one from each Association District, where terms of office shall be three years and so arranged that only three members are elected annually. A Trustee shall not serve more than three consecutive terms. During vacation, the Board of Trustees shall exercise the powers conferred upon the House of Delegates by the Constitution and these By-Laws, provided that in the exercise of these powers thus conferred, the Board of Trustees shall neither consider nor act to contravene any action, mandate, or policy of the House of Delegates which may still be in effect.

Section 2. Officers of the Board. The Board of Trustees shall elect from its membership a Chairman, a Vice Chairman, and a Secretary for terms of one year during the last day of the annual session following adjournment of the House of Delegates. These officers of the Board shall compose its Executive Committee. The duties of the Secretary may be delegated to the Executive Secretary who shall maintain such special records and transcripts of meetings as the Board may desire.

Section 3. Meetings of the Board. The Board of

Trustees shall meet daily during the annual session of the Association and at such other times as necessity may require, subject to the call of the Chairman or on petition of any three members of the Board.

Section 4. Executive Committee. The Executive Committee of the Board of Trustees shall be empowered to act in behalf of the Board on all matters delegated to it by majority vote of the Board. The acts of the Executive Committee, however, shall be subject to confirmation by the Board.

Section 5. Reports of the Board of Trustees. The Board of Trustees shall make an annual report to the House of Delegates and such supplemental reports as necessity may require at a time designated in the regular transaction of the business of the House. The report shall be made by the Chairman, the Vice Chairman, the Secretary, or the Executive Secretary. The reports of the Board shall be made a portion of the annual transactions and proceedings of the Association.

Section 6. Duties of Trustees. Each Trustee shall be organizer and arbiter for his Association District. He shall visit the component medical societies within his District during each year and shall make an annual report of his activities and of the condition of the medical profession of each county of his District. Each Trustee shall be reimbursed for expenses incurred by him in traveling within his District or attending special meetings in the performance of his official duties, which will be allowed upon presentation of an itemized and documented account. This provision shall not be construed to include his expenses in attending the annual session of the Association.

Section 7. Public Policy. The Board of Trustees shall have the right to communicate the views of the medical profession and of the Association in the State of Mississippi with regard to matters of medical science, health, sanitation, and allied spheres of activity. It shall approve all memorials and resolutions issued but shall not issue memorials and resolutions heretofore prohibited in these By-Laws.

Section 8. Association Districts. The State of Mississippi shall be subdivided into Association Districts by counties, provided that all counties in a component society shall be in one Association District. These districts are defined as follows:

- District 1: Bolivar, Coahoma, Humphreys, Leflore, Quitman, Sunflower, Tallahatchie, Tunica, and Washington.
- District 2: Benton, DeSoto, Lafayette, Marshall, Panola, Tate, Tippah, Union, and Yalobusha.
- District 3: Alcorn, Calhoun, Chickasaw, Clay, Itawamba, Lee, Lowndes, Monroe, Noxubee, Oktibbeha, Pontotoc, Prentiss, and Tishomingo.
- District 4: Attala, Carroll, Choctaw, Grenada, Holmes, Montgomery, and Webster.
- District 5: Hinds, Issaquena, Leake, Madison, Rankin, Scott, Sharkey, Simpson, Smith, Warren, and Yazoo.
- District 6: Clark, Kemper, Lauderdale, Neshoba, Newton, and Winston.
- District 7: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Pearl River, Perry, and Wayne.
- District 8: Adams, Amite, Claiborne, Copiah, Franklin, Jefferson, Lawrence, Lincoln, Pike, Walthall, and Wilkinson.
- District 9: Hancock, Harrison, Jackson, and Stone.

### Chapter IX

#### COUNCILS

Section 1. Councils. Councils of the Association shall be elected standing bodies of the House of Delegates, responsible thereto. There shall be a Council on Medical Service, a Council on Scientific Assembly, a Judicial Council, a Council on Constitution and By-Laws, a



Council on Legislation, a Council on Budget and Finance, an Editorial Council, and a Council on Medical Education. A Council member shall not serve more than three consecutive terms.

Section 2. Council on Medical Service. The Council on Medical Service shall be charged with the responsibilities of ascertaining and studying all aspects of medical care in Mississippi. It shall examine and make available all facts, data, and opinion on timely and adequate medical care. It shall investigate social and economic aspects of medical care and report its evaluations and findings. It shall suggest means of distribution of adequate quality medical service to the public consistent with the policies of the Association. It shall act as a factfinding and advisory body of the Association. Under its jurisdictions, there shall be assigned the activities of the Association in medical service, emergency service programs, indigent care, and allied medical agencies. There shall be one member from each Association District elected for a term of three years and so arranged that only three members shall be elected for full terms each year. The Council on Medical Service shall appoint Committees on Occupational Health, Maternal and Child Care, and Mental Health. Each committee shall consist of not less than five nor more than seven members appointed for periods of not less than one nor more than three years.

Section 3. Council on Scientific Assembly. The Council on Scientific Assembly shall be composed of the Secretary-Treasurer and the chairmen and secretaries of the several scientific sections. The Secretary-Treasurer shall be chairman of the Council. Upon this Council shall devolve the duties and responsibilities of planning the annual session to include all scientific activity and the programming and scheduling of annual session events. The Council shall be empowered to appoint such committees for terms not to exceed one year as may be necessary to assist in the discharge of these duties.

Section 4. Judicial Council. The Judicial Council shall consist of nine members elected for terms of three years each, one from each Association District. The judicial powers of the Association shall be vested in this Council whose decision shall be final. The Council shall have jurisdiction in all questions involving membership in the Association, all controversies arising under the Constitution and these By-Laws, interpretation and application of the Principles of Medical Ethics of the American Medical Association, controversies between two or more component societies of the Association and among members of the Association. The Council shall have appellate jurisdiction in questions and controversies referred to the state Association by appropriate and authorized bodies of component medical societies. Appeals shall be perfected within six months following the date of decision by the constituted authority of the component society. The Council, under these several authorities, may conduct such hearings as may be necessary and after due and legal processes may, by majority opinion, censure, suspend, or expel any member for infraction of the Constitution or these By-Laws.

Section 5. Council on Constitution and By-Laws. The Council on Constitution and By-Laws shall consist of three members elected by the House of Delegates for terms of three years each. To this Council shall be referred all suggested amendments and changes in the Constitution and By-Laws of the Association for recommendation to the Board of Trustees and House of Delegates.

Section 6. Council on Legislation. The Council on Legislation shall consist of nine members, one from each association district, elected by the House of Delegates for terms of three years each which are so arranged that three members are elected annually. This Council shall analyze proposed legislation, recommending to the Board of Trustees courses of action for securing laws in the interests of public health, scientific medicine, as well as medical practice. It shall study and report the need for

new and remedial legislation designed to serve the best interests of the state and nation. This Council shall be responsible to the Board of Trustees.

Section 7. Council on Budget and Finance. The Council on Budget and Finance shall consist of three members elected by the House of Delegates for terms of three years each. This Council shall receive reports of the finances of the Association and to it shall be referred all matters pertaining to the annual budget. The Council shall report annually to the House of Delegates, making specific recommendations on the annual budget of the Association. This Council shall be responsible to the Board of Trustees.

Section 8. Editorial Council. The Editorial Council shall consist of the Editor and the Associate Editors, elected by the House of Delegates to serve two years, and the former shall serve as chairman. To this Council shall be referred all reports of scientific subjects and all scientific papers and discussions presented before the Association and its component societies. The Council shall consider for publication in the official organ of the Association such papers, reports, and other data as may serve to further and advance scientific medicine in Mississippi. It shall exercise editorial authority over the official organ of the Association. This Council shall be responsible to the Board of Trustees.

Section 9. Council on Medical Education. The Council on Medical Education shall consist of three members elected by the House of Delegates for terms of three years each. To this Council shall be assigned the responsibilities of encouraging undergraduate and postgraduate study of medicine, licensure, and facilities for medical education in the state. This Council shall be responsible to the Board of Trustees.

## Chapter X COMMITTEES OF THE BOARD OF TRUSTEES

Section 1. Committees of the Board of Trustees. Standing committees of the Board of Trustees shall consist of the Advisory Committee to the Medical Auxiliary, Grievance Committee, the Committee on Publications, and the Committee on Medicine and Religion. All committees of the Board of Trustees shall be appointed by the Board for terms specified unless their selection is otherwise prescribed.

Section 2. Advisory Committee to the Medical Auxiliary. The Advisory Committee to the Medical Auxiliary shall consist of three members appointed for terms of three years each. The committee shall be charged with the responsibility of advising the Woman's Auxiliary to the Mississippi State Medical Association on matters of organization and program activity relating to the supportive role of the Auxiliary in its work with the Association.

Section 3. Grievance Committee. The Grievance Committee shall be appointed by the President with the advice and consent of the Board of Trustees. Its purpose shall be to prevent or resolve misunderstandings, to clarify and adjust differences between physician and patient, and to assist in maintaining the high levels of professional deportment already established by the *Principles of Medical Ethics*. The committee shall consist of nine members, one from each Association District, appointed for terms of three years each so as to provide for appointment of three members annually. Members of this committee shall not simultaneously serve on any disciplinary or appeal body of the Association or its component societies. The committee shall have authority to compel a response either in writing or by personal appearance from any member of the Association, authority to initiate investigations on its own motion, and authority to file charges in the name of the committee before the Judicial Council of the Association. Under no circumstances shall the Grievance Committee ever ex-



## BY-LAWS / Continued

ercise a disciplinary function and its power and authority shall be limited to the receiving of complaints, conduct of investigations, hearings, mediation, arbitration, and where necessary, referral of matters to appropriate bodies for adjudication or discipline. The committee shall prescribe its rules for operation which shall not be in conflict with generally accepted guides promulgated by the American Medical Association.

Section 4. Committee on Publications. The Committee on Publications shall consist of six members. These shall consist of the Editor, the two Associate Editors, and three others, the three latter being appointed by the Board of Trustees for terms of three years which are so arranged to provide for appointment of one such member annually. The chairman of the committee shall be designated by the Board. The committee shall implement instructions and policies of the Board of Trustees relating to the official Journal of the Association. Additionally, the committee shall study and recommend to the Board policy proposals relating to organization and production of the Journal, reporting annually its deliberations.

Section 5. Committee on Medicine and Religion. The Committee on Medicine and Religion shall consist of six members appointed for terms of three years each and so arranged to provide for appointment of two members annually. The committee shall be responsible for formulating a program in the field of medicine and religion and for carrying out such assignments as may be made in this connection by the Board of Trustees.

### Chapter XI

#### RULES AND CONDUCT

*The Principles of Medical Ethics of the American Medical Association* shall govern the conduct of members in their relations to each other and to the public.

### Chapter XII

#### COMPONENT SOCIETIES

Section 1. Component Societies. All component societies now in affiliation with this Association or those that may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and By-Laws shall, upon application to the Board of Trustees and approval by the House of Delegates, receive a charter from and become a component part of this Association. The Board of Trustees and House of Delegates, on recommendation by the Judicial Council, shall have authority to revoke the charter of any component society whose actions are in conflict with the letter and spirit of this Constitution and By-Laws.

Section 2. Number of Societies. Only one component medical society shall be chartered in any county but nothing in this section shall be construed as to prohibit unofficial organization of medical clubs or other county level groups of physicians whose purpose it is to further and advance scientific medicine and postgraduate medical education.

Section 3. Members of Societies. Each component society shall judge the qualifications of its own members, but as such societies are the only portals to this Association and to the American Medical Association, every reputable and legally registered physician who is qualified under Chapter I, Section 1, of these By-Laws shall be eligible for election to membership. Before a charter is issued to any component society, full and ample opportunity shall be given to every

such physician in the county to become a member.

Section 4. Right of Appeal. Any physician who may feel aggrieved by the action of the society of his county or District in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Judicial Council, which, upon a majority vote, may permit him to petition for membership in an adjacent society.

Section 5. Evidence of Appeals. In hearing appeals, the Judicial Council may admit oral or written evidence, as in its judgment will best and most fairly present the facts, but in case of every appeal, efforts at a conciliation and compromise shall precede all such hearings.

Section 6. Area Jurisdiction. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

Section 7. Professional Authority. Each component society shall have general direction of the affairs of the profession in its jurisdiction and shall constantly use its influence to the moral and professional betterment of its physicians, to the end that the membership shall embrace every qualified physician in its jurisdiction.

Section 8. Meetings. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall especially be encouraged to do postgraduate work, and to give the society first benefit of such labors. Official positions and other preferments shall be unstintingly given to such members.

Section 9. Delegates. Each county shall be entitled to representation in the House of Delegates of this Association, one delegate for each fifty members or fraction thereof. Delegates shall be elected for terms of not less than two years and societies shall report such elections to the Executive Secretary of the Association in no event later than thirty days before the annual session.

Section 10. Duties of Component Society Secretaries. The secretary of each component medical society shall perform such duties as are usual and customary to his office. He shall maintain the official roll of membership for his society, shall collect dues and assessments, and shall make official reports as elsewhere prescribed in these By-Laws to the Association, transmitting dues in behalf of component society members. He shall conduct the official correspondence of his component medical society.

### Chapter XIII

#### FISCAL YEAR

The fiscal year of the Association and its component county societies shall begin January 1 each year and end on December 31 following, but membership in the state Association shall not lapse until April 1 of that year.

### Chapter XIV

#### AMENDMENTS

These By-Laws may be amended at any annual session by a majority vote of the delegates present at that session, after the amendment has laid upon the table for one day.

### Chapter XV

#### REPEALING AUTHORITY

Upon adoption of these By-Laws, all previous By-Laws, motions of record, mandates, policies, rules and regulations in conflict therewith are hereby repealed, except that officers elected to serve in the Association and its component societies shall continue their incumbency until the completion of their previously prescribed terms and their successors elected under the current By-Laws.





## Nursing Homes and Medicare: Dilemma, Challenge, and Change

### I

AT THE STROKE of midnight next New Year's eve, there may not be quite as much to celebrate as before, because precisely at that moment, the federal government becomes liable, under Medicare, for more than 1.9 billion days of skilled nursing home care. On January 1, 1967, Title XVIII of Public Law 89-97 will be fully operative as the nursing home or extended care benefits provision goes into effect. It means, very simply, that every one of the nation's 19 million over-65 citizens has a statutory entitlement to 100 days in an extended care facility following hospitalization.

So it is reasonable to believe that if the shortage of skilled nursing home beds has hitherto been the pinch in medical facilities, what can happen after January 1, 1967, may be described as a crush. At the moment, there is one nursing home bed for every 34 Americans over age 65, about 565,000 beds in an estimated 13,500 skilled nursing homes. Compounding the problem, these are virtually filled with patients whose mean age is 80 years. More than half of the nation's seniors are over age 70, and each must be considered a possible applicant for admission into an extended care facility.

Although nearly 700 new nursing homes are under construction, the new and additional 42,000 beds they will furnish will not be enough. The shortage is vividly underscored in the new

context of *availability* which has been redefined by Medicare. Where skilled nursing home care is now paid for in 6 out of 10 instances by the patient and his relatives and in 1 out of 4 instances by welfare and other sources, the bill for every senior citizen can be sent to Uncle Sam on next New Year's Day and thereafter.

### II

As gloomy as the picture appears, there has been something of a boom in nursing home construction since 1960 when Kerr-Mills introduced the government into the bill-paying picture. By the time the near-needy care program had been operating for two years, the federal share of the nursing home bill was almost \$150 million. Last year, the total had increased to \$500 million. While nobody really knows just how much Medicare will pump into nursing home services, many authorities believe that \$1 billion annually will be the outlay.

A second factor has influenced expansion of nursing home facilities, especially among the larger and better homes. This is the FHA-type mortgage guarantee under which nearly all construction costs may be financed by private lenders. More recently, motel chains, labor unions, diversified corporate entities, and private capital consortia are moving into the nursing home field, and Medicare has been the largest single enticement.

## EDITORIALS / Continued

Before Public Law 89-97 went into the statute books, there were only token nursing home care benefits in a few voluntary insurance policies. Almost no Blue plans were in the field. In fact, the best assurance of insurance financing for post-hospital extended care was in health insurance indemnity paid on the per week or per month basis where the carrier obligated himself for a stated amount during a stated period of illness or disability.

The present prospect of voluntary insurance and prepayment getting into nursing home care financing is more remote than ever, because Medicare has largely pre-empted the market. It was once said of extended care that there was no question as to how the bill would eventually be paid, only one of who would do the paying. Medicare has probably settled this.

### III

Most nursing homes in Mississippi stand little chance of qualifying as providers under Medicare. Studies by the Mississippi State Board of Health, the licensing agency for nursing homes, reflect a generally static situation in quality and quantity of services available.

Through 1964, the last year for which complete data are available, there were an even 100 nursing and convalescing homes in the state. Fifty-four of these had fewer than 25 beds, and only 12 had 50 or more beds. The mean was 29 and the median, 22 beds. By individual homes reporting, bed capacities ranged from 6 to 149. All told, the facilities had just over 2,800 beds among which about 680 were in private rooms with 1,000 each in semi-private accommodations and wards.

Among 1,100 employees in the 100 homes, there were only 32 R.N.'s and 74 L.P.N.'s, a classic commentary on nursing home staffing.

Excluding two homes which limit services to alcoholics, there were just under 3,900 patients served that year among whom 2,800 were age 65 and over. In fact, those in the 75-to-84 age bracket numbered 1,700, and there were 1,000 over age 85. About 800,000 days of patient care were provided. Female patients totaled 2,500 or about 65 per cent, and males cared for numbered 1,300 or 35 per cent. One patient out of three was not ambulatory.

### IV

*The New York Times Magazine* says that "the average patient admitted to a nursing home re-

mains there for the rest of his life." Among 1,750 admissions to Mississippi homes in 1964 to a census of 2,150 at the beginning of the year, there were 968 live discharges and 604 deaths. The mean length of stay was 457 days or about 15 months.

The stiff criteria or conditions for participation in Medicare by a nursing home raise serious questions as to how much service can be rendered under the program, not only in Mississippi but in other states as well. A second question of no less magnitude is after the 100 nursing home days of Medicare, what happens to the patient? In fact, what happens after the first 20 days when the \$5 per day coinsurance charge becomes effective?

The Medicare regulations prescribe 16 categories of compliance as conditions of participation for nursing homes under the program. These range from medical supervision to accounting methods.

Each approved nursing home must be under the constant, 24 hours per day supervision of a registered professional nurse. This means literally that a graduate R.N. or licensed L.P.N. who is a graduate of a state-approved school must be in charge of each shift. Moreover, the home must have a transfer agreement with a hospital. There must be physician supervision of each patient, and clinical records must be maintained in the nursing home.

Each nursing home approved for participation in Medicare will be accepted under one of three categories. The first or category 1 approval is for those institutions found to be operating without any significant deficiencies in accordance with all of the prescribed conditions of the regulations. These will, indeed, be few.



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*"He'll never prescribe for me. I just saw him mix Scotch and ginger ale."*



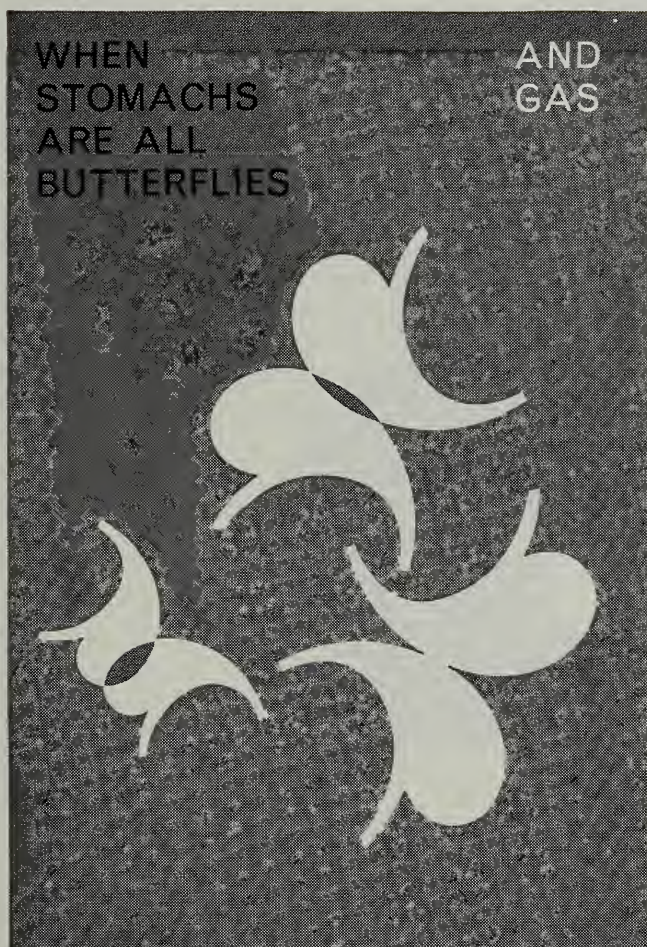
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## EDITORIALS / Continued

The second approval category will include those homes which, although found to have deficiencies in one or more of the conditions of participation, are making reasonable efforts to correct them and in the meanwhile are rendering adequate care without hazard to the patient's health and safety. Third will be nursing homes which, because of their isolated location or because of the lack of sufficient facilities in their areas, may be found eligible to participate so as to assure Medicare beneficiaries access to extended care facilities. This is the special certification category, and such approved homes must have no deficiencies which would jeopardize the health and safety of patients.

Arthur E. Hess, the Medicare chief, says that "ultimately, as more extended care facilities are born, we would expect that the need for special certification will decline." In short, the gap will be bridged with existing homes, but they should not expect to continue to care for Medicare patients unless they upgrade and improve their physical facilities and quality of services.

## V

The nursing home industry isn't asleep at the switch. Within the past five years, the National Council for Accreditation of Nursing Homes has come into being as the counterpart to the hospitals' Joint Commission. Other organizations, notably AMA, the American Hospital Association, American Nurses Association, and other professional bodies, have given strong support to the American Nursing Home Association in its quest for improving the quality of service to patients.

State licensing laws, almost a joke in 1961, are today becoming tighter and more stringent. Where Kerr-Mills programs have included nursing home services, standards of care have risen, and the same may be expected when Title XIX, the new concept of comprehensive health care for all needy persons, becomes mandatorily effective in 1970.

But for the present, Medicare will begin the tenuous process of separating the sheep from the goats in the nursing home industry, even though exceptions will be made in the early phases of the extended care program during 1967.

More than 90 per cent of the nation's nursing homes are privately owned, and this may be the greatest asset the industry possesses in this critical period of transition. The service is urgently needed, and whether it is good or bad, a powerful new financing force is about to arrive abruptly on the nursing home scene. So there will be com-

pressed into the space of a few months the full dimensions of the nursing home dilemma, the challenge for more and better service, and the inevitable change which will come.—R.B.K.

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2. Horwitz, J.: The Nursing Home Industry Tools Up, N. Y. Times Mag., May 1, 1966, p. 27.
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4. 1964 Report of Institutions for the Aged or Infirm, Miss. State Bd. of Health, Div. of Chronic Illness Services, Dec. 31, 1964 (unpub.).
5. Public Law 89-97, 89th Congress, H.R. 6675, July 30, 1965, 79 U.S. Stat. 286.

# The Rules You Made

Once each year in the July issue, the JOURNAL publishes the Constitution and By-Laws of the association to the membership. This is done under a policy laid down by the Board of Trustees almost seven years ago.

And why devote eight valuable JOURNAL pages every summer to dry copy filled with legalistic phrases, articles, sections, and subsections?

Very simple: The Mississippi State Medical Association is owned and operated by its members. Through a constitutional process, they make the rules, chart the course, and oversee the job. Each member has not only the right but the duty as well to have full and complete access to the rules he has helped to make.



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Almost no annual session comes and goes without changing the By-Laws. The 98th Annual Session in May was no exception in voting amendments both to the Constitution and to the By-Laws. Make a mental note to skim through *your* Constitution and By-Laws and remember that the current version may always be found in your July JOURNAL.—R.B.K.

## Maternity Care and Costs

Just as it costs more to purchase an automobile, a pound of beef, or a haircut today than it did 10 years ago, it also costs more to have a baby. The Health Information Foundation of the University of Chicago has published an interesting study on maternity care and costs over the decade 1953-63, and the findings are revealing.

Taken as a nation, American mothers are well cared for during pregnancy and at delivery. Almost 99 per cent of births today take place in a hospital with a physician in attendance. In 1963, 52 per cent of all pregnant women consulted a physician during the first trimester of pregnancy, and most came in before the second month had passed. An astonishing 88 per cent had been seen professionally before the end of the second trimester, and in 1963, each maternity patient averaged 10.5 prenatal visits to her physician.

The mean costs involved in complete maternity care increased from \$193 in 1953 to \$316 in 1963, but significantly, the physician's share of the total expenditure decreased to 42 per cent or \$133 from 47 per cent. As is true in all major health care, the hospital share increased to 51 per cent from 42 per cent. Drugs, lab fees, and other services incidental to delivery accounted for the remaining 7 per cent.

Voluntary prepayment and health insurance figured in 58 per cent of all deliveries with private care in 1963 for a mean benefit of \$236. For physicians' fees, the Blue plans paid a range from a low of \$50 to a high of \$210 for the California Blue Shield. The insurance companies, generally speaking, were on the low side in between.

In Mississippi, the Dependents' Medical Care program, the original Medicare, averaged over \$150 for physicians, despite the ground rule of deducting for prenatal care by trimester during which the patient is first seen. The figure does, however, include routine office laboratory procedures.

The ever-declining maternal mortality rate in the United States is most eloquent testimony to

the quality of the care which American mothers receive.—R.B.K.

## Decade of Progress

At the decennial commencement, the University of Mississippi Medical Center, through its three schools, conferred the 811th degree with the proud record of having graduated 570 physicians from the medical school. The 186th baccalaureate degree was granted by the school of nursing, while the graduate school of allied sciences conferred the 27th master's and 28th doctoral mantles.

This is an important achievement in the brief span of a decade. At its first commencement in 1957, just 24 doctors of medicine were graduated. The next year, 15 degree nurses joined 44 physicians at graduation. In 1966, the largest classes received their diplomas with the graduation of 68 physicians, 32 nurses, eight masters of science, and three Ph.D.'s.

Concomitantly, the institution has continued to build its physical facilities and multi-discipline research program. Plans for the future are both impressive and ambitious in every area of the center's concern and responsibility.

Not least among teaching achievement is the postgraduate program for physicians comprised of a number of AMA-approved residencies. Hospital training programs for medical technologists, x-ray technicians, and other allied professional fields round out a comprehensive balance in the broad areas of medical education.

Periodic symposia and seminars for practicing physicians extend the academic and clinical resources of the center, and contributions to the medical literature by faculty members are considerable and valuable. This decade of progress has much meaning for the state and the American scientific community. The future offers both challenge and promise.—R.B.K.



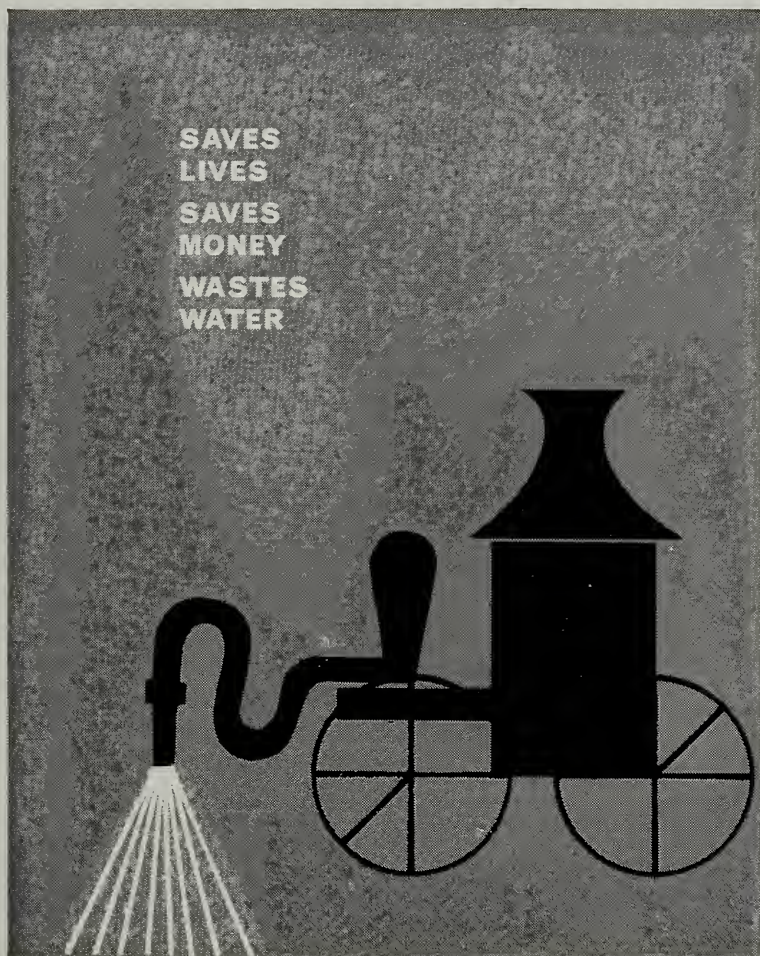
## DEATHS

HENRIQUES, ADOLPH, Biloxi. M.D., Tulane University School of Medicine, New Orleans, La., 1906; interned Charity Hospital, New Orleans, La., one year; died May 12, 1966, aged 84.

RICHMOND, ALBERT V., Lake Cormorant. M.D., Memphis Hospital Medical College, Tenn., 1909; member, American Academy of Railroad Surgeons; died May 10, 1966, aged 79.



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**Precautions:** As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

**Side Effects:** Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have occasionally been noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by the administration of thiazides.

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## NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

**BARRAZA, DONALD FRANK**, Natchez. Born New Orleans, La., Sept. 6, 1927; M.D., Louisiana State University School of Medicine, New Orleans, 1953; interned U. S. Naval Hospital, Pensacola, Fla., one year; GP residency, E. A. Conway Memorial Hospital, Monroe, La., one year; ob-gyn residency, Ochsner Foundation Hospital, New Orleans, La., three years; dermatology residency, V. A. Hospital, Little Rock, Ark., three years; diplomate of the American Board of Ob-Gyn; elected March 1, 1966, by Homochitto Valley Medical Society.

**MORA, LIDIO ONELIO**, Jackson. Born Cuba, Aug. 29, 1917; M.D., Havana University, Cuba, 1941; interned Calixto Garcia Hospital, Havana, Cuba, two years; residencies, Mercedes Hospital, Havana, Cuba, two years, Massachusetts General Hospital, Boston, two years, and a fellowship in gastroenterology, Jackson Memorial Hospital, Miami, Fla.; member, American Gastroenterology Association; elected May 3, 1966, by Central Medical Society.

**ROBINSON, ROLLO HERSCHELL**, New Albany. Born Smith County, Miss., April 28, 1938. M.D., University of Tennessee College of Medicine, Memphis, 1964; interned St. Francis Hospital, Wichita, Kansas, one year; elected April 7, 1966, by North Mississippi Medical Society.

**TYSON, NADIA ABOUSSOUAN**, Jackson. Born Jerusalem, Palestine, Jan. 28, 1932; M.D., University of Beirut Medical School, Lebanon, 1959; interned Mississippi Baptist Hospital, Jackson, one year; radiology residency, University of Mississippi School of Medicine, Jackson, three years; member, Mississippi Radiological Society; elected May 3, 1966, by Central Medical Society.

**YERGER, FREDERIC STITH, JR.**, Jackson. Born Jackson, Miss., May 25, 1935; M.D., University of Mississippi School of Medicine, Jackson, 1960; interned University of Mississippi School of Medicine, Jackson, one year; internal medicine residency, University of Mississippi School of Medi-

cine, Jackson; fellowship in infectious diseases, University of Mississippi School of Medicine, Jackson, one year; elected May 3, 1966, by Central Medical Society.



## PERSONALS

**WILLIAM L. BASS, JR.**, of Laurel has been appointed area chairman of the \$24.4 million Tulane Forward Fund. The program will assist in the development of the academic program, underwrite new construction costs for buildings, and increase the university's endowment fund.

**GUY D. CAMPBELL** of Jackson has been elected president of the Mississippi Tuberculosis Association. Active in tuberculosis and thoracic work for many years, he will direct the volunteer activities of 87 county associations in tuberculosis and respiratory disease programs.

**DEWITT HAMRICK** of Corinth has been re-elected secretary-treasurer of the Tombigbee River Valley Water Management District. The district is a combine of 19 northeast Mississippi counties with an annual budget of more than \$550,000 financed by a two mill tax retention.

**GEORGE H. MARTIN** of Vicksburg has been elected president of the Alton Ochsner Surgical Society. The society which met recently at Point Clear, Alabama, includes former Fellows of the Ochsner Foundation who practice throughout the United States.

**HENRY P. MILLS, JR.**, of Jackson has been certified as a diplomate of the American Board of Ophthalmology. He has recently relocated his offices in Suite 604 of the Medical Tower at 440 East Woodrow Wilson Drive

**JACK H. PHILLIPS** and **CARL PASSMAN** of Natchez have announced the removal of their offices to the Natchez Bone and Joint Clinic on Jefferson Davis Boulevard. Their practices are limited to orthopaedic surgery.

**ROLAND E. TOMS** of Jackson was honored by the Wayne State University School of Medicine along with 13 of his classmates from the class of 1916. Golden Anniversary Diplomas were presented to the 50 year graduates.





## Book Reviews

**Therapeutic Radiology.** By William T. Moss, M.D., Professor of Radiology, Northwestern University School of Medicine. 503 pages with illustrations. St. Louis: The C. V. Mosby Company, 1965. \$18.75.

This is the second edition of a highly regarded book on radiation therapy, the first having been published in 1959. It has been completely revised to include newer concepts, techniques and results. The author notes that increasingly widespread availability of megavoltage and telecobalt equipment has resulted in considerable changes in the techniques of therapy.

The initial chapter, written as an introduction to clinical radiotherapy, serves the purpose admirably. The author points out that excellent texts are readily available dealing with clinical behavior of neoplasms, clinical radiophysiology, biology and physics. With an understanding of the growth characteristics of cancer and knowledge of the radiation tolerance of normal tissue, it is felt that techniques of irradiating the tumor are relatively simple. For this reason, the author's primary emphasis is on rationale rather than on the finer details of technique.

Stress is placed upon the close teamwork necessary in working with and understanding the place of the pathologist, surgeon, internist, physicist, and cancer chemotherapist.

A new chapter on combination of radiotherapy and surgery summarizes current concepts of preoperative and post-operative therapy, pointing out the current revival of interest in preoperative irradiation in various clinical situations.

The remaining chapters systematically take up the therapeutic approach to cancer of various organs and areas, beginning with skin and ending with the central nervous system.

Beginning each chapter is an evaluation of the radiation response of the normal tissue in question. Doctor Lauren V. Ackerman, in his preface, states that this feature alone establishes the importance and high value of this book.

A general discussion of the radiation therapy to the particular area follows covering indications, techniques, clinical care, prognosis, and results.

A final chapter considers the radiation management of a few benign conditions such as plantarwarts and keloids, concluding with a section covering the place of radiation in the field of malignant soft tissue tumors.

This volume is highly recommended for both the resident and practitioner of therapeutic radiology. It is written in a clear, concise style and strikes a good balance in evaluating the limitations as well as the possibilities of radiation in the management of malignant disease.

JAMES M. PACKER, M.D.

## New Books Received

**New Drugs—1966.** Evaluated by the AMA Council on Drugs. 584 pages. Chicago: American Medical Association, 1966. \$4.00.

**Pediatric Therapy.** By Harry C. Shirkey, M.D., Associate Professor of Pediatrics, Medical College of Alabama and Director, The Children's Hospital of Birmingham. 1223 pages with illustrations. St. Louis: The C. V. Mosby Company, 1966. \$18.50.

**Heritable Disorders of Connective Tissue.** By Victor A. McKusick, M.D., Professor of Medicine, The Johns Hopkins University School of Medicine. 499 pages with illustrations. St. Louis: The C. V. Mosby Company, 1966. \$18.50.

**Cardiac Evaluation in Normal Infants.** By Robert F. Ziegler, M.D. 170 pages with illustrations. St. Louis: The C. V. Mosby Company, 1965. \$12.75.

**Current Therapy—1966.** Edited by Howard F. Conn, M.D. 857 pages. Philadelphia: W. B. Saunders Company, 1966. \$13.00.

**Gastroenterology.** By Henry L. Bockus, M.D., Emeritus Professor of Medicine, University of Pennsylvania Graduate School of Medicine. 1352 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. \$30.00.



## MEETINGS

### NATIONAL AND REGIONAL

American Medical Association, Clinical Convention, Nov. 27-30, 1966, Las Vegas. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago, Ill. 60610.

American Academy of General Practice, Oct. 8-13, 1966, Boston. Mr. Mac F. Cahal, Executive Director, Volker Blvd. at Brookside, Kansas City, Mo. 64112.

International College of Surgeons, 15th Biennial Congress, Oct. 1-4, 1966, Mexico City, D. F., Mexico. Mr. Stanley Henwood, Executive Director, 1516 Lake Shore Drive, Chicago, Ill. 60610.

Southern Medical Association, Nov. 14-17, 1966, Washington. Mr. Robert F. Butts, Executive Director, 2601 Highland Ave., Birmingham, Ala. 35205.

### STATE AND LOCAL

Mississippi State Medical Association, May 15-18, 1967, Biloxi. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson.

Amite-Wilkinson Counties Medical Society, Third Monday March, June, September, December. S. E. Field, Jr., Centreville, Secretary.

Central Medical Society, First Tuesday, January, March, May, September, November, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. James R. Cavett, Jr., Suite B-6, Medical Arts Building, Jackson, Secretary.

Claiborne County Medical Society, First Monday January and July, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Port Gibson, Secretary.

Clarksdale and Six Counties Medical Society, Third Wednesday March and First Wednesday November, 2:00 p.m., Clarksdale. Robert L. Forman, Coahoma County Hospital, Clarksdale, Secretary.

Coast Counties Medical Society, First or Second Wednesday, January, March, May, September, and November. C. D. Taylor, Jr., 113 Davis Ave., Pass Christian, Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Secretary.

DeSoto County Medical Society, Second Thursday, January, April, July, and October, 1:00 p.m., Mary's Restaurant, Hernando. Malcolm D. Baxter, Jr., McIntosh-Baxter Clinic, Hernando, Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Secretary.

Homochitto Valley Medical Society, First Tuesday Quarterly, Jefferson Davis Memorial Hospital, Natchez. Walter T. Colbert, Jefferson Davis Memorial Hospital, Natchez, Secretary.

North Central District Medical Society, Third Wednesday March, June, September, and December. William E. Riecken, Jr., P. O. Box 831, Kosciusko, Secretary.

Northeast Mississippi Medical Society, Second Tuesday, March, June, September, and December, Corinth. S. Jay McDuffie, Nettleton, Secretary.

North Mississippi Medical Society, First Thursday, April and October, Oxford. M. Beckett Howorth, Jr., 2200 S. Lamar Blvd., Oxford, Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. Joseph C. Griffing, Lucius Olen Crosby Memorial Hospital, Picayune, Secretary.

Prairie Medical Society, Second Tuesday, March, June, September, December. J. M. Griffith, 824 Second Ave. North, Columbus, Secretary.

South Central Mississippi Medical Society, Second Tuesday March, June, September, and December. Julian T. Janes, Jr., 304 Clark, McComb, Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. John E. Green, Green Clinic, Hattiesburg, Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg. Patrick G. McLain, 1301 Washington St., Vicksburg, Secretary.



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**Indications:** Use Erythrocin-Sulfas in infections more susceptible to the combination than to either agent alone. These are usually found in urinary, lower respiratory tract, and chronic ear infections.

**Contraindications:** Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or new born infants.

**Warnings:** As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

**Precautions:** Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated.

**Adverse Reactions:** Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

If a reaction or overgrowth of nonsusceptible organisms occurs, withdraw the drug.

**Supplied:** The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. each of sulfadiazine, sulfamerazine and sulfamethazine. 603303



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**DIVERTICULITIS**

**SPASTIC URETERITIS**

**BLADDER SPASM**

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*direct musculotropic action  
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Available in 100 milligram pink sugar-coated tablets.

*The high therapeutic index permits dosage sufficient to relieve spasm promptly. The usual initial dose is 4 tablets. Maintenance dosage is usually one or two tablets 4 times a day.*

**Trocinat** BRAND THIPHENAMIL HCl  
BETA-DIETHYLAMINOETHYL DIPHENYLTHIOACETATE HYDROCHLORIDE

*Directly relaxes smooth muscle spasm  
Combats hypermotility*

*Non-mydratic, may be used in glaucoma*

Trocinat (Thiphenamil HCl) has been found in three clinical studies, (J. Mo. Med. Assoc., 48:685-6; Med. Rec. & Annals, 43:1104-6; J. Urol., 73:487-93), to be effective and to be virtually free of side-effects. Fifteen years of wide clinical usage has affirmed the safety and effectiveness of Trocinat.

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In mild hypertension, Naturetin lowers blood pressure gradually toward normotensive levels. In long-term therapy, Naturetin may keep blood pressure low—for months, sometimes years. When used in combination with other antihypertensive agents, blood pressure often falls further—and lower doses of both drugs are usually possible.

Clinical trials have proven Naturetin effective—without serious side effects.<sup>1,2</sup> And, when used to treat patients with cardiac edema and hypertension, "in no instance did the concentration of serum potassium fall below 3.1 mEq. per liter."<sup>3</sup> (Normal range for serum potassium: 3.5-5.0 mEq./liter).<sup>4</sup>

When readings indicate hypertension, start with Naturetin, stay with Naturetin.

**Contraindications:** Severe renal impairment; previous hypersensitivity.

**Warning:** Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting, or G.I. bleeding occur.

**Precautions:** The dosage of ganglionic blocking agents, veratrum, or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Electrolyte disturbances are possible in cirrhotic or digitalized patients.

**Side Effects:** Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, and rashes may occur.

**Supplied:** Naturetin (Squibb Bendroflumethiazide) 5 mg. and 2.5 mg. tablets. Also available—Naturetin  $\bar{c}$  K [Squibb Bendroflumethiazide (5 or 2.5 mg.) with Potassium Chloride (500 mg.)]. For full information, see Product Brief.

**References:** 1. Telfeyan, S. A.: Clin. Med. 70:1668, 1963. 2. Shepard, H. L.: J. Am. Geriatrics Soc. 11:363, 1963. 3. Cummings, D. E.; Goodman, R. M., and Steigmann, F.: J. Am. Geriatrics Soc. 12:161, 1964. 4. Castleman, B., ed.: New England J. Med. 268:1462, 1963.

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# University Graduates 68 Physicians In Decennial Commencement Ceremonies

The University of Mississippi School of Medicine graduated 68 as doctors of medicine at its 10th commencement on May 29 at Jackson. The largest class in the school's history received their doctoral mantles and diplomas in impressive exercises at the Galloway Memorial Methodist Church.

The commencement speaker was Dr. Robert Q. Marston of Bethesda, Md., associate director of the National Institutes of Health and head of the regional program for heart disease, cancer, and stroke. Until last February, Dr. Marston served as vice chancellor of the University of Mississippi and dean and director of the medical center at Jackson.

In addition, 32 nurses received baccalaureate

degrees, eight candidates were awarded master's degrees, and three Ph.D. mantles were given.

Dr. James Wilson Aiken, II, of Senatobia, received the Leathers Medal for his being graduated first in the class. Miss Dorothy Hall of Smithdale was the winner of the Faculty Award.

Prior to the commencement exercises, the traditional breakfast sponsored by the medical alumni association honored graduates and their families. After the ceremonies, the chancellor of the University, Dr. J. D. Williams, and Mrs. Williams honored the classes with a reception.

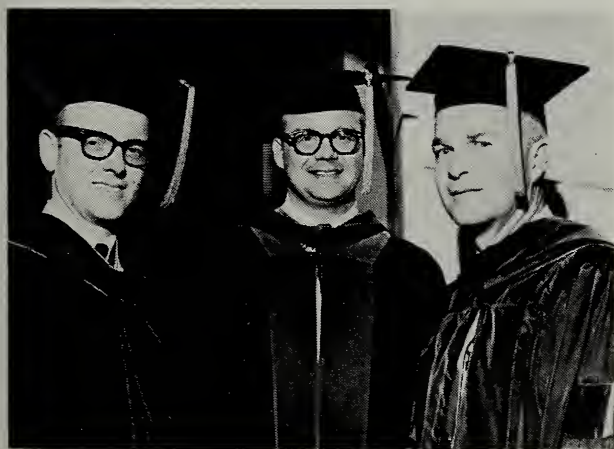
Thirty-two Mississippi communities and four other states were represented among the 68 physician-graduates. Jackson led with 17 new M.D.'s. Other Mississippi cities having more than one graduate included Laurel with six, Starkville with four, Greenville with three, and Corinth, Forest, Hattiesburg, McComb, Natchez, and Vicksburg with two each.

Communities having one M.D. graduate were Aberdeen, Ackerman, Centreville, Columbus, Crosby, Gulf Hill, Gulfport, Hollandale, Holly Springs, Inverness, Iuka, Lexington, Louisville, Meridian, New Albany, Olive Branch, Petal, Pope, Ruth, Saltillo, Senatobia, Union, and Vicksburg.

Out-of-state graduates numbered four, from Jasper, Ala., Shreveport, La., Nogales, Ariz., and Chicago, Ill.

The 1966 graduating class of physicians represents an increase of 283 per cent over the first class of 24 graduated in 1957. In 10 years, the University of Mississippi School of Medicine has graduated 570 physicians.

The school of nursing has granted 186 bachelor of science degrees in the same period, while the graduate school of allied sciences has awarded 27 master's and 28 doctoral degrees.



*Dr. James Wilson Aiken, II, of Senatobia, center, won the Leathers Award as top scholar in the class of 1966 at the University Medical Center. Congratulating him are, left, Dr. John A. Gronvall, acting dean and director, and Dr. Robert Q. Marston of Bethesda, Md., commencement speaker and former dean and vice chancellor of the University.*

## Robins Hosts 1965 Physician Awardees

Thirteen 1965 winners of the physician award for outstanding community service visited Richmond May 5-8 as guests of A. H. Robins and its president, E. Claiborne Robins.

Each of the physicians had been selected as having the greatest record of community service for a doctor in his state.

In the group were Dr. Paul L. Singer of Phoenix, Ariz.; Dr. Clyde O. Anderson of St. Petersburg, Fla.; Dr. William N. Bergin of Hilo, Hawaii; Dr. Philip A. Robichaux of Raceland, La.; Dr. Richard A. Young of Hagerstown, Md.; Dr. Maura J. Mitchell of Ellisville, Miss.; and Dr. C. W. Woodbury of Las Vegas, Nev.

Also in the group were Dr. Hugh B. Woodward of Albuquerque, N. M.; Dr. Alonzo P. Peeke of

Volga, S. D.; Dr. Homer W. Humiston of Tacoma, Wash.; Dr. Herbert L. Harvey of Casper, Wyo.; Dr. Henry M. Farmer of Burlington, Vt.; and Dr. Frank E. Handy of Appalachia, Va.

During their stay, the physicians were greeted at breakfast by the Hon. Morrill M. Crowe, mayor of Richmond, toured A. H. Robins' manufacturing plant and research center and attended a reception and dinner.

At the dinner, they were welcomed to Virginia by Dr. Alexander McCausland of Roanoke, president of the Medical Society of Virginia. On hand to welcome the group were Dr. Carl W. Meador, president of the Richmond Academy of Medicine, and Dr. R. Blackwell Smith, Jr., president of the Medical College of Virginia.

Another highlight of the visit was a day-long conducted tour of Richmond and its points of historical interest.

Winners of the Physician Award are selected by their respective state medical associations. The award, which is made available to the associations by A. H. Robins, was established in 1960 and now is presented in 18 states, the District of Columbia and Puerto Rico.

## PHS Sponsors Disaster Service Meet

A Public Health Service-sponsored interdisciplinary symposium on disaster preparedness for physicians, dentists, nurses, veterinarians and pharmacists was held recently in Atlanta. In addition to the members of the health professions, representatives of State Civil Defense agencies were also invited.

Dr. Hugh B. Cottrell, regional health director, HEW Region IV, who presided over the symposium emphasized that it is the ability of health professionals to expand functions within their own discipline and to adapt these functions to the various types and magnitudes of disaster situations that should be the basic goal of disaster preparedness.

During the two day meeting, program material was introduced that was recently published by the Division of Health Mobilization, PHS. Attendees were asked to discuss methods of promoting the use of this material in State and community disaster preparedness programs as well as incorporating it into the curricula of their respective professional schools.



*Dr. Maura J. Mitchell of Ellisville, winner of the 1965 MSMA-Robins Award, is welcomed to the Richmond, Va., laboratories and plant of A. H. Robins by its president, E. Claiborne Robins.*



## New President-Elect Has Long Leadership Record

Dr. Temple Ainsworth of Jackson who was named president-elect of the state medical association by acclamation at the 98th Annual Session will be the first urologist to serve in Mississippi medicine's number one post.



*Dr. Ainsworth*

He has devoted his entire professional career to private practice in Jackson following his medical education and postgraduate training and now also serves as clinical professor and chairman of the Department of Urology at the University of Mississippi School of Medicine.

A native of Bay Springs, Miss., Dr. Ainsworth received his B.S. degree at Ole Miss and his M.D. from the University of Virginia. Both his internship and residency in urology were at the University of Virginia Hospital. He is a diplomate of the American Board of Urology and a Fellow of the American College of Surgeons.

Prior to the organization and construction of the new four year medical school at Jackson, Dr. Ainsworth served the University of Mississippi as a consultant and toured a number of medical schools throughout the nation as the Mississippi institution was planned. He has chaired the association's Council on Medical Education for a number of years and has served as a member of the Council on Medical Service.

At national level, Dr. Ainsworth is serving as a member of the Executive Committee of the American Urological Association. He is a past president of the Southeastern Section of AUA and chairman of its Committee on Postgraduate Education. He is also governor for Mississippi in the American College of Surgeons.

Long active in the leadership circles of the state medical association, he has held key committee assignments and chairmanships. At local level, he has served as president of the Central Medical Society.

Dr. Ainsworth will be inaugurated president at the 99th Annual Session, May 15-18, 1967, at Biloxi.

## Pediatric Meet Is Set for Gatlinburg

The Great Smoky Mountains Pediatric Seminar will be conducted July 9-11 at Gatlinburg, Tenn., according to Dr. John C. Rochester of Knoxville, secretary-treasurer of the group. The seminar is a new designation for the former East Tennessee Pediatric Association.

Dr. Rochester said that essayists will include Drs. James N. Etteldorf, Harry C. Shirkey, Charles Reiser, and John R. Maddox, Jr. Any physician having an interest in pediatrics is welcome, Dr. Rochester added.

Further details may be secured by writing the secretary-treasurer at 4807 Newcom Ave., N.W., Knoxville, Tenn. 37919.

## Congress on Quackery Slated for Chicago

The Third National Congress on Medical Quackery will be held October 7-8 at the Pick-Congress Hotel in Chicago.

Joint announcement of the congress was made by F. J. L. Blasingame, M.D., executive vice-president of the American Medical Association, and Peter G. Meek, executive director of The National Health Council.

The AMA and The National Health Council, the nation's largest organization of professional, governmental and voluntary agencies in the health field, will serve as co-sponsors of the October Congress.

The two previous National Congresses on Medical Quackery, in 1961 and 1963, were held in Washington, D. C.

The October congress will be based on the theme of "Quackery: 1966" and will be aimed at calling to the attention of the nation the perils posed by present-day fads and fallacies in the health field.

Each of the two earlier congresses, which received wide public and professional acclaim, were attended by more than 600 persons interested in medical quackery, representing the fields of education, government, and professional and voluntary organizations. Plans are being made for an attendance—by invitation—of 750 to 1,000 persons at the Chicago congress.

## MHA Reports Progress, Names Officers at Meet

Combining its annual meeting with a special conference on heart disease and stroke, the Mississippi Heart Association met at Jackson during May 24-25. Boswell Stevens of Macon and Jackson, 1965-66 president, said that income from the annual Heart Fund appeal, memorial gifts, and bequests had grown to \$235,000 for the present year from a previous high of \$220,000.

Dr. David J. Van Landingham of Jackson, past president of the organization, became the first recipient of the MHA Gold Heart Award, which recognizes meritorious and distinguished service.

Prior to the annual meeting which marked the 15th year of the organization's service, a conference on cardiovascular disease was conducted under the joint sponsorship of the Heart Association, State Board of Health, and state medical association. Discussion subjects included coronary artery disease, hypertension, rheumatic fever and congenital heart disease, strokes, heart research, and personnel and facilities.



*Dr. David J. Van Landingham of Jackson, left, is presented the first Mississippi Heart Association Gold Heart Award by President Boswell Stevens for outstanding service.*

In presenting the first Gold Heart Award to Dr. Van Landingham, President Stevens said that the Heart Association "draws its strength and direc-

tion of purpose from the thousands of our citizens who volunteer their time and effort to further our stated objectives." He described the association as "a working partnership of outstanding professionals and dedicated laymen."



*Newly elected officers for 1966-67 of the Mississippi Heart Association are, from left, Donald Bartlett, secretary; Boswell Stevens, immediate past president; Dr. J. P. Tatum, vice president; G. V. Montgomery, president-elect; and Dr. Eugene M. Murphey, III, president.*

Dr. Van Landingham has served as MHA president, as chairman of its rehabilitation conference, as a member of the Committee on Budget and Personnel, as a member of its speakers bureau, as a member of the Board of Directors, and as delegate to the American Heart Association. He initiated the community stroke programs now underway in many Mississippi counties and organized the annual businessmen's tours of heart research facilities at the University Medical Center in Jackson.

Officers selected for the 1966-67 association year included Dr. Eugene M. Murphey, III, of Tupelo, president; Sen. G. V. Montgomery of Meridian, president-elect; Dr. J. P. Tatum of Meridian, vice president; Donald Bartlett of Como, secretary; and Ray R. McCullen of Jackson, treasurer.

Physician members of the Board of Directors include Drs. Clifford Tillman of Natchez, W. K. Purks of Vicksburg, Gerald Hopkins of Oxford, Gaines L. Cooke of Grenada, David J. Van Landingham of Jackson, Wesley W. Lake of Gulfport, William E. Weems of Laurel, Howard A. Nelson of Greenwood, C. C. Thompson, Jr., of Columbia, Raymond F. Grenfell of Jackson, A. H. Little of Oxford, G. Spencer Barnes of Columbus, William J. Gillespie, Jr., of Jackson, Robert D.



# New low-cost tetracycline/antifungal therapy

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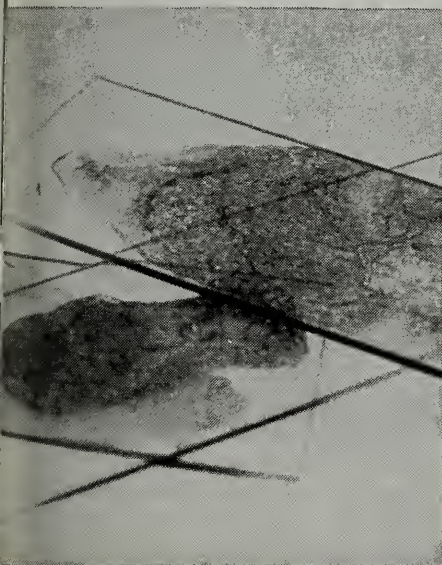
2. nonpregnant women with a history of recent  
or recurrent monilial vaginitis



3. elderly or debilitated patients



4. patients with a past history of moniliasis



5. patients on long-term tetracycline or cortico-  
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Each capsule contains tetracycline phosphate complex equivalent to tetracycline hydrochloride 250 mg. and nystatin 250,000 units.

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than most  
tetracycline-antifungal products.



## ORGANIZATION / Continued

Currier of Jackson, Samuel J. Simmons, III, of Pascagoula, and J. Manning Hudson of Jackson.

President Stevens said in his annual report that a total of \$124,000 had been allocated to heart research during the year. For the first time, the association awarded its first clinical fellowships, giving five such grants plus 13 grants-in-aid to qualified Mississippi researchers. The sum of \$20,000 was given in support of the Mississippi Heart Association Chair of Cardiovascular Research at UMC, he added.

A number of additional awards were given individual members in recognition of outstanding service in the volunteer program.

## State Morbidity Reported Through May 27

The Mississippi State Board of Health reports the following occurrence of morbidity for 1966 through 21st week of the year, ending May 27. Case totals are shown opposite the disease condition.

Tuberculosis, pul. ....	353
Tuberculosis, O.F. ....	17
Dysentery, Bac. ....	19
Salmonella Inf. ....	8
Meningococcal infections ....	13
Encephalitis, Inf. ....	4
Hepatitis, infectious ....	128
Mononucleosis, infectious ....	18
Helminthic infections	
Hookworm ....	375
Ascariasis ....	138
Strongyloides ....	20
Streptococcus infections	
Strep throat ....	2,062
Scarlet fever ....	37
Mumps ....	221
Measles ....	828
Influenza ....	792
Chickenpox ....	204
Syphilis	
Early ....	313
Late ....	67
Gonorrhea ....	1,843
Rabies in animals	
Bats ....	2

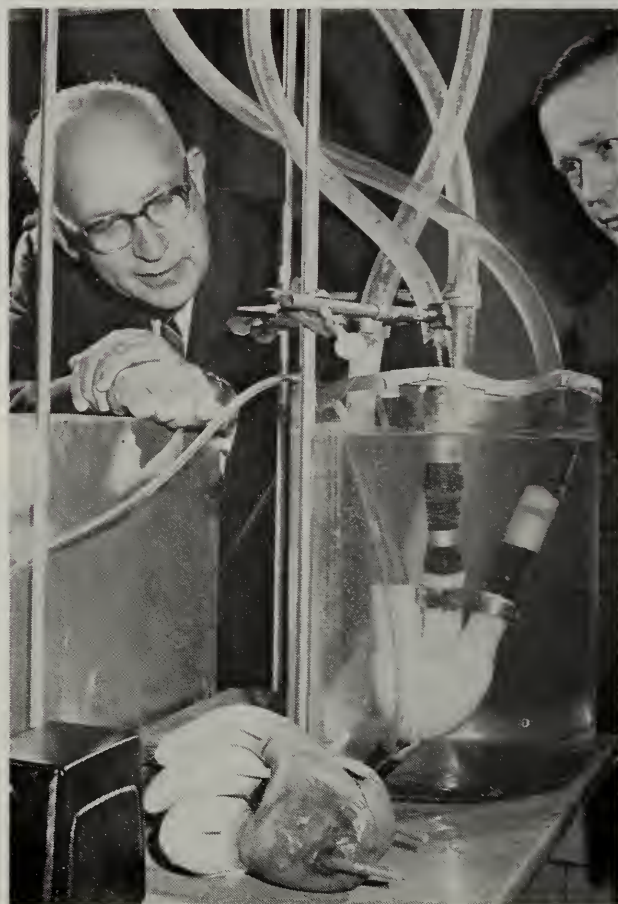
## Eli Lilly Names New Board Chairman

Eli Lilly today was elected chairman of the Board of Directors of Eli Lilly and Company. He succeeds his brother, the late Josiah K. Lilly, who died earlier this month.

For the last five years Eli Lilly has been honorary board chairman.

The Lilly company is a major producer of pharmaceuticals and biologicals and of agricultural, industrial, and home products.

## Ventricular Bypass Was Developed by Goodyear



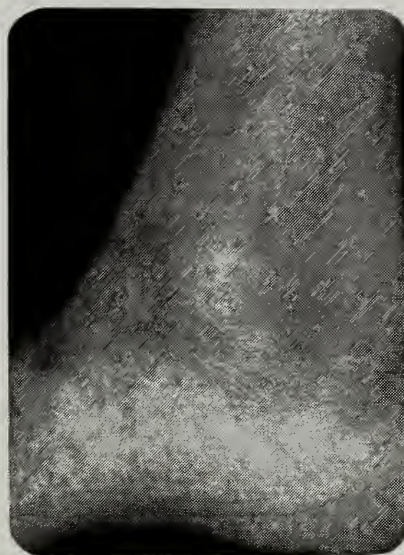
Prototype of the left ventricular bypass, popularly called an artificial heart, is examined by A. J. Garcia, research vice president of the Goodyear Tire and Rubber Co. of Akron, left, and Dr. George C. Morris, Jr., an associate of Dr. Michael DeBakey of Houston who made the first implant of the refined version. Bypass pump was developed by Goodyear in partnership with the Cleveland Clinic and Dr. DeBakey.



# eczema: scourge of childhood



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In most cases responsive to topical ARISTOCORT, the 0.1% concentration is sufficiently potent. The 0.5% concentration provides enhanced topical activity for patients requiring additional potency for proper relief.

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**Contraindications:** Tuberculosis of the skin, herpes simplex, chicken pox and vaccinia.

**Precautions and Side Effects:** Do not use in the eyes or in the ear (if drum is perforated). A few individuals react unfavorably under certain conditions. If side effects are encountered, the drug should be discontinued and appropriate

measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyoderma will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

**Packages:** Tubes of 5 Gm. and 15 Gm.; ½ lb. jar.

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## Millsaps Alumni Name Physician Officers

Two Jackson physicians are among the five newly elected officers of the Millsaps College Alumni Association. Dr. Raymond S. Martin was named president, and Dr. James R. Cavett, Jr., was elected vice president. Balloting among the college's alumni was by mail.

Dr. Martin defeated Neal Cirlot, public relations director for the Mississippi Hospital and Medical Service.

Other officers named included Joseph E. Wroten of Greenville and the Rev. J. L. Neill of Decatur, both vice presidents. Mrs. E. B. Bell of Jackson was elected secretary.

Announcement of the elections was made at the college's annual Alumni Day ceremonies. More than 8,000 ballots were sent to Millsaps alumni throughout the United States and in foreign nations. Among retiring officers of the alumni group are two other physicians, Drs. Jesse L. Wofford of Jackson and William E. Riecken of Kosciusko.

## Thoracic Society Names Officers for 66-67

The Mississippi Thoracic Society, the medical arm of the Mississippi Tuberculosis Association, conducted its Annual Meeting at the University Medical Center in Jackson. Dr. Willard Boggan of Jackson, state president, directed the chest physicians' seminar.

The meeting of chest physicians followed the Mississippi Tuberculosis Association's annual meeting. The medical seminar climaxed a year of educational advances in the respiratory field of medicine. The immediate past thoracic meeting was held in January of this year.

Dr. Myra Tyler of Jackson, chairman of the program committee, presented two guest lecturers and eight other authorities in the thoracic field. Dr. James K. Alexander of Houston, Texas, presented a paper, "Pathophysiology and Clinical Manifestations in Pulmonary Embolism." Dr. Alexander, author of over 60 original papers dealing with respiratory research, is professor of medicine in the Department of Internal Medicine, Texas Medical Center of Baylor University.

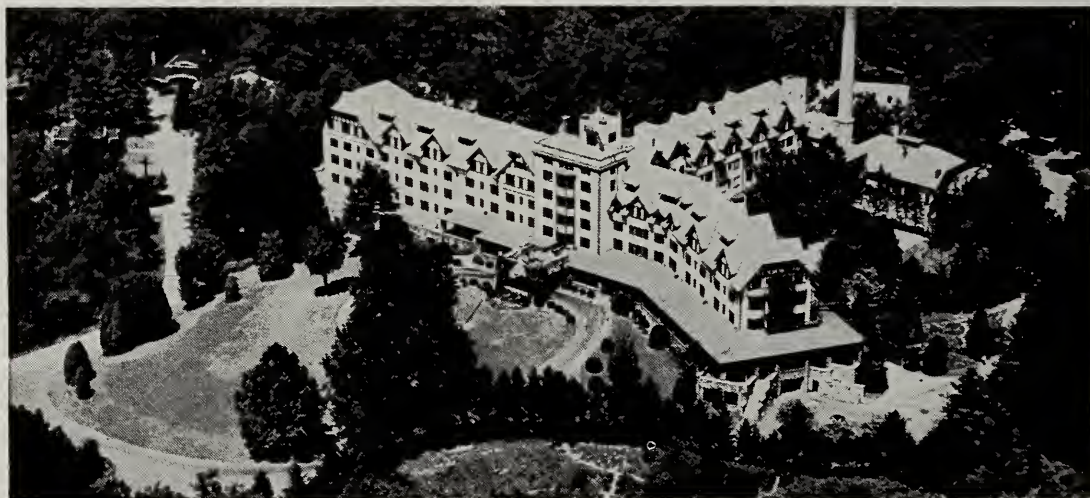
Dr. Merrill N. Bradley of Birmingham, pre-

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sented two papers, "Surgical Management of Pulmonary Embolism" and "Venous Angiography in Pulmonary Embolism." Dr. Bradley is associate professor of surgery and full time faculty member at the University of Alabama Medical College. He also serves as thoracic division chief of the V. A. Hospital and the University Hospital and Clinic of Birmingham. Dr. Bradley's first paper was

presented in a panel discussion with Dr. Hillary Timmis and Dr. Harold Conn, both of Jackson.

Dr. Robert Sloan of Jackson, presented a paper entitled "Radiological Aspects of Pulmonary Embolism."

The session also provided a paper by Dr. Richard Fleming and R. Harvey Sykes, both of Jackson. Their paper was entitled "Autopsy Experiences at the University of Mississippi Medical Center Regarding Pulmonary Emboli." Other papers of the seminar, "Clinical Problems in Pulmonary Vascular Disease," were presented by Dr. Joe S. Covington of Meridian, Dr. Charles Martin of Natchez, and Dr. Samuel Fields, Jr. of Centreville.

New officers for the year are: President, Dr. T. T. Justice of Gulfport; Vice President, Dr. Frank B. Hays of Columbus; Secretary-Treasurer, Dr. J. T. Hamrick of Jackson; Executive Committee Members, Dr. Joe S. Covington, Meridian, Dr. Clyde A. Watkins of Sanatorium.

Dr. Richard Riley of Meridian, chairman of the Membership Committee, has extended an invitation to all interested physicians to join the Mississippi Thoracic Society. Applications for membership may be secured by writing P. O. Box 9865, Jackson, Mississippi.



Mississippi Thoracic Society leaders are, from the left, Drs. Joe S. Covington, Myra D. Tyler, Willard H. Boggan, Frank B. Hays, and J. T. Hamrick.

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## Rx Drug Wholesale Prices Are Down

### Natchez Society Has 100 Per Cent on Rolls

The Homochitto Valley Medical Society is the most recent component body of the association to join the exclusive 100 per cent membership units. Dr. James L. Royals of Jackson, state association secretary-treasurer, said that the society had reported 1966 enrollment of 100 per cent of its renewable 1965 membership.

Other component groups with similar records were reported during the 98th Annual Session. These include Amite-Wilkinson, Claiborne County, Delta, DeSoto County, Pearl River County, and the West Mississippi medical societies.

Dr. Royals said that the 1965 membership of 1,414 was the highest in association history. Current membership for 1966 is lagging behind the previous record year, he added, but it is expected to meet the prior level before the end of the summer.

### AMA Sets Infant Mortality Conference

A National Conference on Infant Mortality is being sponsored by the American Medical Association's Committee on Maternal and Child Care. The conference will be held on August 12-13, 1966, at the Fairmont Hotel in San Francisco, California.

An open invitation to attend is being extended to chairmen and members of all state and county maternal and child care; perinatal and maternal mortality committees; state health department directors of maternal and child health; medical school faculty members in departments of obstetrics and gynecology, pediatrics, and preventive medicine. Other interested physicians and representatives of groups concerned with the problems of infant mortality are also invited to attend.

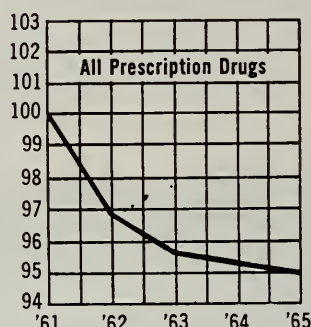
The program has been planned to explore effective approaches for continuing the reduction of infant mortality. Special workshops will be arranged to discuss the identification of high risks, organization and delivery of special care services, manpower utilization, continuity of reproductive care and problems of prematurity.

Evidence disclosed shows that prescription drug manufacturers have been holding the line on prices despite nationwide inflationary pressures.

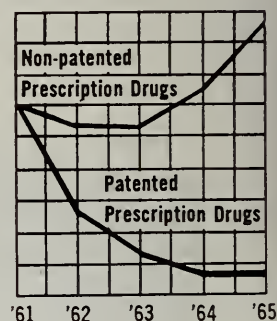
Figures through 1965 show a drop in wholesale prices for prescription products averaging 1 per cent a year since 1961.

Drug products covered by patents have shown an even more consistent drop—8 per cent during the same period—a fact which belies recent criticism aimed at the existing American patent system, according to the Pharmaceutical Manufacturers Association (PMA). Non-patented drug items have experienced an increase of slightly more than 2 per cent.

The new price index findings indicate agreement with President Johnson's 1966 economic report which stated that manufacturers' selling price levels for prescription drugs are at least 5 per cent lower than in the period from 1957 through 1959.



Source:  
U. S. Bureau of Labor Statistics



Source:  
Pharmaceutical Manufacturers Assn.

*While prices in general have continued to rise, drug price levels have declined significantly. The wholesale price level of all prescription drugs has declined 5 per cent since 1961. Even more dramatic is the downward trend in prices of patented Rx drugs, down 5.3 per cent during the same period when non-patented drugs rose in price 2.5 per cent.*

The price indexes announced by PMA were prepared by the U. S. government's Bureau of Labor Statistics, in the case of the all-prescription-item index, and by Professor John M. Firestone, City College of New York economist and a PMA consultant, in the case of the patented-vs.-non-patented comparisons. PMA represents producers of more than 95 per cent of the nation's prescription drug supply.





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# Miltown® (meprobamate)

**Indications:** Meprobamate is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, meprobamate fosters normal sleep through both its anti-anxiety and muscle-relaxant properties.

**Contraindications:** Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

**Precautions:** Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side effects:** Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses.

Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

**Usual adult dosage:** One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

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## Memorial to Mrs. Raulston Is Begun

Members of the South Mississippi Medical Auxiliary have established a fund in memory of the late Mrs. William R. Raulston of Hattiesburg. She was fatally injured in an automobile accident in March.

Observance of Doctors Day in the South Mississippi Auxiliary area was cancelled this year as part of the memorial with funds earmarked for the event being used to begin the fund in memory of Mrs. Raulston. It will be used in conjunction with the two Hattiesburg hospitals, Methodist and Forrest General.

Mrs. Raulston is survived by her husband, Dr. William R. Raulston of Hattiesburg, and their children.

## Central Is Honored for Disaster Service

The state medical association's largest component, the Central Medical Society, received an American Red Cross award recognizing the outstanding services of physicians in the March 3 tornado disaster. In the Jackson area, 53 were killed and 500 were injured.

Receiving the award for the society was Dr. Edward M. Lowicki of Jackson, chief of medical care for the Jackson-Hinds County disaster service program. The presentation was made by George Sheffield, local Red Cross disaster chairman.

## Mean Health Expense Is \$129, Study Shows

The average American had an annual health expense of \$129 during 1962, data collected in the Department of HEW's Health Interview Survey show.

This expense increased directly with age, ranging from \$61 for children under 6, to \$208 for persons 65 and over.

Included as health expenditures were physician expense, hospital in-patient expense, medicine

costs, dentist expense, and special or other medical expense such as eye glasses, speech therapy, wheel chairs, and emergency or out-patient treatment in a hospital or clinic.

Physician expense represented about one-third of the total health expenses in the population, and, regardless of sex and age, was invariably greater than any of the other four categories of health expense. Total health expense increased with the educational level of the family head and with the level of family income.

## 1967 NOLA Graduate Assembly Dates Set

Plans for the 30th Annual Meeting of the New Orleans Graduate Medical Assembly have been announced for March 6-9, 1967, according to Dr. Friedrichs H. Harris, secretary of the organization. Headquarters for the 1967 meeting will be the Roosevelt Hotel, he said.

Newly elected officers include Drs. H. Ashton Thomas, president; H. Reichard Kahle, president-elect; Louis A. Monte, first vice president; J. Theo Brierre, second vice president; Pascal L. Danna, third vice president; and Dr. Harris, secretary.

Other officers include Drs. Samuel R. Staggers, treasurer; John G. Menville, program director; Charles L. Brown, Jr., and John L. Kron, assistant program directors.

## ACCP Names 66-67 Officer Slate

Members of the Mississippi Chapter of the American College of Chest Physicians have named 1966-67 officers at their recent annual meeting conducted at the Mississippi State Sanatorium.

Dr. Jesse L. Wofford of Jackson is president. Other officers are Drs. Clyde A. Watkins of Sanatorium, vice president, and Frederick E. Tatum of Hattiesburg, secretary-treasurer.

Scientific highlights of the dinner meeting were papers by Dr. Dawson B. Conerly, Jr., of Hattiesburg, "Diagnostic Features of Cancer of the Lung," and Hilary H. Timmis of the University Medical Center, Jackson, "Treatment of Spontaneous Pneumothorax."



## Shield Enrollment, Benefits Hit Highs

Blue Shield membership and benefit payments both reached record highs during 1965, while operating expense fell to a new low, according to the National Association of Blue Shield Plans.

Membership of the Blue Shield Plans in the United States, Puerto Rico, and Canada increased 1,653,378 during 1965 to a record 57,910,154.

A record \$1,354,422,450 in benefits was paid on behalf of Blue Shield subscribers during the year, up \$113,105,819 over 1964.

Operating expenses during 1965 fell .3 per cent to an all-time low of 8.3 per cent.

Over 25 per cent of the membership increase—549,612—was acquired during the second quarter of the year. The addition of a new Plan—Windsor, Ontario—contributed 263,445 members to the second quarter gain.

During 1965, membership gains were reported by 67 Plans, 16 had losses, and two remained the same. Gains totaled 2,181,618, while losses amounted to 528,240. The first quarter contributed 170,219 to the membership gain.

Third quarter membership gains of 438,856 were posted by 56 Plans, with 26 Plans reporting losses of 129,412. Three Plans showed no change.

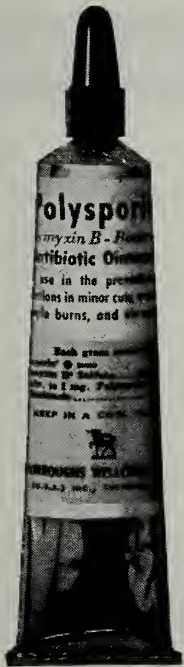
Fourth quarter membership gains of 879,094 were posted by 72 Plans, with 10 Plans reporting losses of 254,981. Three Plans showed no change.

The 2.77 per cent enrollment increase during the year brought Blue Shield coverage in the United States of 27.3 per cent of the population.

Blue Shield at the end of 1965 covered 4.3 per cent of the population of Puerto Rico and 26.4 per cent of the Canadian population.

Benefits paid out during the year amounted to over 90 per cent of subscription income. Subscription income in 1965 increased more than \$143 million over 1964 to record \$1,501,971,485 for all Plans.

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"Untold wealth? How's that?"  
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# JOURNAL of the Mississippi STATE MEDICAL ASSOCIATION

Volume VII

Number 8

August 1966

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only one in the morning 

and one in the evening 



# ERYTHROCIN®-SULFAS

## Brief Summary

**Indications:** Use Erythrocin-Sulfas in infections more susceptible to the combination than to either agent alone. These are usually found in urinary, lower respiratory tract, and chronic ear infections.

**Contraindications:** Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or new born infants.

**Warnings:** As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

**Precautions:** Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated.

**Adverse Reactions:** Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

If a reaction or overgrowth of nonsusceptible organisms occurs, withdraw the drug.

**Supplied:** The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. each of sulfadiazine, sulfamerazine and sulfamethazine. 603303



## PMA Answers HEW Statement on Drugs

The Pharmaceutical Manufacturers Association which represents 140 makers of 95 per cent of the nation's prescription drugs struck back sharply at a pronouncement of the Department of Health, Education, and Welfare.

PMA quoted the government release as saying that "since more than 15,000 prescription drugs are now in common use and since any one of them may be sold under as many as 50 to 75 trade names, physicians need simplified methods of selecting those they prescribe."

Answering the statement, PMA spokesmen said that "the figure of 15,000 evidently includes every known dosage form and strength provided for every known drug."

Continuing, the rebuttal said that "to state that 'any one' of these may be available under '50 to 75 trade names' is fallacious." The PMA statement called the alleged need for "simplified methods" unsupportable.

Another accusation in the HEW release was that prescription drugs "accounted for the greatest increase in drug prices since 1939." PMA pointed out that earlier this year, President Johnson had cited declining prescription prices as the chief factor in preventing a more rapid rise in the overall medical care cost picture.

Drug prices, PMA added, have declined at retail down to an index of 90.7 from 100.0 in 1959, while the wholesale price index is down to 95 from 100 in 1961.

"The release (by HEW) completely overlooks the economic gain involved in the use of a growing number of specifically curative and preventive prescription drugs since 1939," the PMA response said.

"For example, largely because new drugs can prevent and cure tuberculosis, more than half of the hospital beds used for tuberculosis patients as recently as 1956 are now available for other purposes. Reduction in hospitalization of mental patients, due largely to the discovery and application of new drugs, has saved at least \$4 billion in hospital construction costs alone during the past decade."

PMA suggested that while the prices of any goods and services should properly be the subject of public attention and concern, misleading or contrived statistics obviously have no place in such considerations.





# NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

August 1966

Dear Doctor:

The third antitrust suit against medicine in the history of American jurisprudence has been filed against the College of American Pathologists. The suit, signed by Atty. Gen. Katzenbach, alleges CAP runs lab monopoly and fixes prices. The two previous actions were brought against state medical associations in District of Columbia and Oregon.

Apparent favorite target for nongovernment suits in medicine is AMA, currently being sued for \$90 million in federal court. Suit was brought by optometrists over policy declarations. AMA Trustee Gerald Dorman says that average of two suits a week are being filed against AMA.

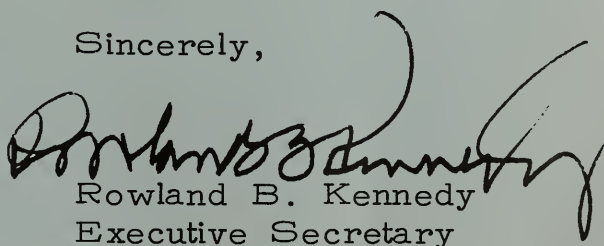
A Syracuse, N.Y., scientist says that force-feeding 100 proof bourbon whisky may prevent coronary artery disease. Dr. Samuel Mallov reported boozed-up rats showed increase in the enzyme, lipoprotein lipase, which breaks down fat particles. Prudently, he warns that rats can metabolize proportionately greater amounts of alcohol than people.

FDA Commissioner James L. Goddard is aiming his big guns at vitamin and nutrient additives in foods. New regulations will set standards for food supplements on basis that proper diet supplies abundant amounts of vitamins and that except in cases of medical need, such supplements are useless. Big hassle is shaping up with vitamin makers vigorously opposing edict.

A new chair of cardiovascular research has been established at the University of Alabama Medical Center in Birmingham. Endowed by the Alabama Heart Association, chair will be occupied by Dr. T. Joseph Reeves. Similar endowment has been made at UMC by Mississippi Heart Association for years.

Look for a liberalizing of the Federal Trade Commission's ruling of no-phony-TV-doctors which had support of AMA and broadcasters. FTC has issued an advisory opinion that there is no objection to use of pseudonym in lieu of a physician's real name on TV and radio. Ban was first enforced over actors posing as physicians in commercials.

Sincerely,



Rowland B. Kennedy  
Executive Secretary



## DATELINE - MEDICAL AMERICA

### First Medicare Patient Is From Illinois

Naperville, Ill. - Mrs. Lillian Grace Avery, 68, was recorded as the first American to receive benefits under Medicare. Her claim was filed at 10:05 a.m. on July 1 for hospital service. Social Security Administration says that she also has Part 1-B medical coverage. Mrs. Avery was admitted to Edward Hospital, a 110 bed Hill-Burton institution, for minor surgery.

### Douglas Seeks Price Ceiling On Medicare Drugs

Washington - Sen. Paul Douglas (D., Ill.) is advocating a new concept in government payment for drugs in S. 3578, a measure sure to be opposed by physicians and the pharmaceutical industry. Offered as an amendment to Medicare, the bill would establish a Public Health Service formulary, listing drugs only by generic name. Payment under Medicare would be made only for the lowest priced items, and patient would have to pay the difference between formulary generics and brand name drugs if latter were prescribed by physicians.

### N.Y. Sees Increase In X-Ray Use, Licenses Technicians

Albany, N.Y. - The New York State Health Department says that Medicare and the new Title XIX welfare medical programs may increase use of x-ray as much as 50 per cent. Public Health officials are warning against overuse and excessive exposure. After having licensed x-ray machines for 10 years, state now has mandatory technician licensing on theory that many deficiencies have been with operator. Said one NYPHS doctor: "It was like inspecting and registering automobiles without licensing the drivers."

### Social Security Booms In Mississippi

Jackson - One out of nine Mississippians is receiving Social Security benefits, according to the Jackson district SS office. In 1965, a total of over 253,000 received almost \$157 million in benefits. Chief beneficiaries are 112,600 retirees and 80,000 widows and surviving children. This represents a 500 per cent increase over 1955 when only 50,000 were receiving payments. Growth suggests extent of potential medical care coverage under various Social Security titles.

### New Ploy Urged For Control Of Workmen's Compensation

Oak Ridge, Tenn. - The U.S. Atomic Energy Commission recently sponsored a conference on federal-state records-keeping standards for workmen's compensation. Move has been interpreted as a new approach to federally controlled programs. Proposed legislation to take workmen's compensation out of hands of states has previously failed in the Congress.





ORIGINAL PAPERS

## Twenty Years' Progress In the Treatment of Leukemia

DAVID M. OWEN, M.D.  
Jackson, Mississippi

ON BROWSING through the textbooks of medicine and hematology of a few years ago, I ran across the 1941 edition of Kracke's *Diseases of the Blood* which had a very interesting section on the current thoughts on leukemia of that day. He<sup>1</sup> stated that:

There is no more unfortunate diagnosis that can be made in medicine than that of acute leukemia, especially since the patients are usually young people. It should be made only after careful and thorough study, with extreme reluctance, and only after every other possibility has been exhausted. When the diagnosis has been established, it is a sentence to sure death, except that there is no court to state the day, and no crime has been committed to merit the sentence.

This was certainly a gloomy picture painted of the disease leukemia in 1941—one which left little hope in afflicted patients. Did the facts about leukemia in the early 1940's actually warrant such a pessimistic outlook? This was only 20 to 25 years ago. If the prognosis of these patients then was actually as dismal as has been intimated, has it improved recently?

Leukemia is probably a very old disease. Hippocrates described cases which would seem to be

what we call leukemia today. In 1839 at the Hotel Dieu in Paris, Donne<sup>2</sup> made the first microscopic observations on this disease. Virchow<sup>3</sup> coined the name leukemia in 1845 after observing that the cells involved were leukocytes. Following this more cases were recognized.

---

*The progress made in treatment of acute and chronic leukemia during the past 20 years is traced. In acute leukemia in children, survival has been increased from two months median to 13 months. Increase in survival in adults with acute leukemia and in chronic leukemia is apparent but not as dramatic. No cure for leukemia exists but modern drugs and irradiation can offer useful palliation now that was not able to be given 20 years ago.*

---

In the early 1940's leukemia was not classified as a malignancy. While many realized that there was a close relationship between leukemia and neoplasms, some of the foremost workers in the field such as Naegeli felt that leukemia should not be thought of as a malignancy. In 1949 leukemia was first formally classified as a cancer under the Sixth Revision of the International List of Causes of Death in the World Health Organization adopted in the United States of America.

---

From the Department of Medicine, University of Mississippi School of Medicine.

Read before the annual meeting, American Cancer Society, Mississippi Division, Jackson, Sept. 16, 1965. Dr. Owen is now located at Hattiesburg, Mississippi.

## LEUKEMIA / Owen

In 1940 there were 5,286 deaths from leukemia in the United States. This was 3.6 per cent of all cancer deaths.<sup>4</sup> Mississippi recorded 45 deaths from leukemia during this same period.<sup>5</sup> Numerous survival statistics for leukemia for the 1940's can be found. In a compilation of 259 cases of chronic myelogenous leukemia by several writers,<sup>6</sup> the average duration of life following the onset of symptoms was 3.28 years. Likewise, in 152 cases of chronic lymphocytic leukemia, the average survival was 3.29 years.<sup>6</sup> Minot and Isaacs<sup>7</sup> found the average duration of life after the onset of symptoms in 78 patients with chronic myelogenous leukemia treated with irradiation to be 3.5 years while in 52 untreated patients it was 3.04 years. No difference in survival was found in a series of patients with chronic lymphocytic leukemia whether or not they were treated with irradiation.<sup>8</sup>

### POTASSIUM ARSENITE TREATMENT

Potassium arsenite was one of the standard treatments of the day for leukemia. However, Wintrobe<sup>4</sup> found it to be of no value in chronic lymphocytic leukemia and of less value than irradiation in chronic myelogenous leukemia. There was, however, a considerable variation in life expectancy of these patients with chronic leukemia. In one series<sup>8</sup> 12 per cent of the patients lived five to ten years in spite of the fact that the average patient survived for a much shorter period of time. In another series<sup>9</sup> two lived for 16 years, and a patient with chronic lymphocytic leukemia is reported to have lived for 25 years.<sup>4</sup>

The picture in acute leukemia was much more dismal. In one series,<sup>10</sup> 21 patients survived less than two weeks, 53 between two and four weeks and 19 one to two months. An acute leukemia survival of six months was extremely rare.<sup>4</sup> The median survival for children with acute leukemia in the early 1940's was only about two months.<sup>11</sup> One series<sup>12</sup> reported only 8 per cent of 150 patients as having even a temporary remission.

### HEMORRHAGE COMPLICATION

As bad as the short life expectancy of these patients was, their existence while waiting for their inevitable fate was even worse. One of the most dreaded complications of leukemia was hemorrhage. This was actually due to or accompanied by a low platelet count in the patient's blood. This low platelet count complicated mat-

ters because the treatment of the day—irradiation—could be given only cautiously for fear of further reducing the platelet count and increasing the bleeding. One writer<sup>1</sup> stated that "a severe hemorrhagic picture is always a sign that the end is not far off." Infections were particularly bad. In many patients infections seemed to initiate a downhill course. Patients with leukemia lacking the functionally useful white blood cells that we normally have simply could not cope with the bacterial and viral onslaughts. The sulfa drugs were about the only weapons the practicing physician had against infection until penicillin became generally available during the mid-1940's.

Surely we will all agree that the average leukemia patient in the early 1940's had at best a bleak appearing future. The survival in acute leukemia was next to nothing and the chronic leukemia patients, while living longer, had a miserable existence with continual weight loss, fever, infections, and hemorrhages. Has the picture improved today? We have the impression that it has—but let us look at the statistics.

The incidence of leukemia is definitely on the increase as can be seen in Table 1. In the period

TABLE 1  
RISING INCIDENCE OF  
LEUKEMIA

Year	Rate Per 100,000 Population
1925 .....	2.4
1940 .....	4.4
1960 .....	7.5

1921 to 1925 there was an incidence on the national level of 2.04 patients with leukemia per 100,000 population. This rose in males to 4.4 per 100,000 in 1940 and by 1960 was 7.5 per 100,000 population.<sup>13</sup> The estimated mortality in the United States in 1963 was nearly 14,000 persons.<sup>14</sup> To illustrate this figure, consider the entire population of a city the size of McComb dying of leukemia.

The rising incidence of leukemia within Mississippi is even more obvious than that on the national level. In 1940 the State Board of Health recorded 45 persons as dying of leukemia. By 1950 the total had risen to 88 or almost double the 1940 figure and by 1964 it was 145 persons or over three times the 1940 figure.<sup>5</sup> During this period there was no significant change in the population of the state. The cause of this increase is not completely apparent. It may be that we are



just better at diagnosing leukemia than we were 20 years ago. Of course the incidence may truly be increasing. The real reason is most likely a combination of these two factors and perhaps some other reasons.

## OLD MODES OF THERAPY

Twenty years ago very few modes of therapy were available to the practitioner for treating leukemia patients. The main ones were x-ray, phosphorous-32 and arsenic in Fowler's solution. Generally these have now gone by the wayside except for the first two which are still occasionally useful. The past 20 years has seen the development of several classes of useful chemotherapeutic agents as can be seen in Table 2. We feel these agents are definitely beneficial through decreased morbidity though this is hard to demonstrate statistically. Increased survival can be demonstrated, but it is not so significant as the decreased morbidity. As has already been pointed out, the course of leukemia is extremely variable from case to case making evaluation of the effects of a given therapeutic program difficult. Especially is this true in chronic leukemia.

You remember the survival figures for chronic leukemia in the 1940's—three to three and one-half years no matter what type or form of therapy. Recently one series<sup>15</sup> of 30 patients with chronic myelogenous leukemia treated with busulfan was found to have a median survival of 42 months. Another series<sup>16</sup> reported remissions in 26 of 32 patients or 81 per cent of the patients with chronic myelogenous leukemia. They did not mention survival. In chronic lymphocytic leukemia the improvement is slightly higher. Molander<sup>17</sup> reported a survival of 4.4 years in this condition. A compilation of several series<sup>18</sup> comparing chlorambucil and cyclophosphamide in the treatment of chronic lymphocytic leukemia gave a 62 per cent remission rate with chlorambucil and a 53 per cent remission rate with cyclophosphamide. The best results reported were in a series<sup>19</sup> of 100 patients with both forms of chronic leukemia in which a median survival of 58 months or almost five years was noted.

## SURVIVAL RATES

The increase in survival in acute leukemia, especially in children, with therapy is more noticeable. You recall that in the 1940's the median survival in acute leukemia was only about two months with very few patients living over six months and only an 8 per cent remission rate. In 1959, Wintrobe<sup>20</sup> reported his treated acute leu-

kemia patients as having a median survival of six months. Meighan<sup>21</sup> reported a 1950-55 survival of two months and a 1956-61 survival of six months.

There is a basic difficulty in comparing survival statistics—you have to know their reference point—that is, are they measuring survival from

TABLE 2  
CHEMOTHERAPEUTIC DRUGS USEFUL  
IN LEUKEMIA

1) Alkylating Agents
A) Nitrogen Mustard
B) Busulfan
C) Triethylene Melamine
D) Cyclophamide
E) Chlorambucil
F) Triethylene Thiophosphoramide
2) Antimetabolites
A) Methotrexate (Amethopterin)
B) 6-Mercaptopurine
3) Hormones
A) Adrenal Cortical Hormones
4) Vinca Alkaloids
A) Vincristine
B) Vinblastine
5) Miscellaneous
A) Demecolcin

the date of onset of symptoms or the date of diagnosis, and what criteria were used for selecting patients for inclusion or, perhaps more important, exclusion from their series. Some series exclude all patients who were thought not to have received an adequate course of therapy thus increasing their average survival. Many series do not give this important information.

## UMC EXPERIENCE

At the University Hospital we have been fortunate enough to have had our acute leukemia records for the past few years reviewed. We are indebted to Dr. Gussie Higgins for her appraisal of these charts. Our survival figures at first may be disappointing but these must be evaluated in terms of the type of patient seen in our clinics and the fact that there were no exclusions from our series, all patients with acute leukemia were included. As can be seen in Table 3 in all our patients diagnosed through 1962, Dr. Higgins found a mean survival of 7.9 months after diagnosis in children and 5.3 months in adults. If these figures were to be analyzed, one would find that children have only a short symptomatic period before diagnosis (1.7 months) as compared

## LEUKEMIA / Owen

to adults 3.4 months, but children have longer survival periods on therapy. The median figures are much lower, 5.6 months survival for children after diagnosis and 2.8 months for adults.

In children with acute leukemia during 1955-1957 at University Hospital, approximately 10 per cent survived for 16 months while in the years 1960-62 about 20 per cent survived this 16 month period. Similarly in adults with acute leukemia

TABLE 3  
SURVIVAL IN ACUTE LEUKEMIA  
AT UNIVERSITY OF MISSISSIPPI  
MEDICAL CENTER

	Children		Adults	
	MONTHS MEAN	MONTHS MEDIAN	MONTHS MEAN	MONTHS MEDIAN
Duration of Sx prior to diagnosis . . . . .	1.7		3.4	
Survival after Dx . . .	7.9	5.6	5.3	2.8
Total survival . . . .	9.6		8.7	

there were no 16 month survivors in the period 1955-1957 while in the 1960-62 period about 13 per cent survived 16 months.

Recently Emil Frei in the *Journal of the American Medical Association*<sup>11</sup> reported on the progress being made in the treatment of acute leukemia especially in children with a combination of drugs. He stated that significant remissions can now be obtained in 80 per cent of children with acute leukemia. A combination of Methotrexate, 6-Mercaptopurine, Viscristine and Prednisolene was used to obtain this excellent remission rate. On the national level with improved therapy, survival is now 13 months in acute leukemia.<sup>11</sup> Figure 1 shows the increase in survival rate in acute leukemia in children from 1946 to 1963, as additional chemotherapeutic agents became available.

### DATA SHOW PROGRESS

Is progress being made in the treatment of leukemia? Are patients living longer now? I believe that these figures show they are. Perhaps we can better illustrate this improvement by comparing figures for long-term survival with acute leukemia. As you recall, in the 1940's a survival of over six months with acute leukemia was very rare. In the University Hospital clinics we have had a total of 12 patients with acute leukemia surviving 24 months or two years. Two of these are still alive at 28 and 31 months and one has survived for over five years. Four of these long survivors

are children and the remaining eight are adults. The V.A. Hospital here in Jackson has had two patients with acute leukemia to survive for eight years. A six month survival is no longer the exception as over half the children and almost half the adults can expect to live this long.

Simple prolongation of life is of questionable benefit if these patients are given merely a few more months of misery rather than productive months. Here also great advances have been made. Where once leukemia patients were continually beset with infections and hemorrhages, we can now better control these conditions. It is true that infections and hemorrhages still account for most of the mortality and morbidity in leukemia but patients can now be rescued from these scourges in many instances. While few acute leukemia patients can return to normal life, most can have a comfortable life. Many patients with chronic leukemia are now able to return to their usual occupations. Advances in the antibiotic fields, platelet transfusions, and improved methods for initiating clotting are among other factors accounting for the more comfortable life of these patients.

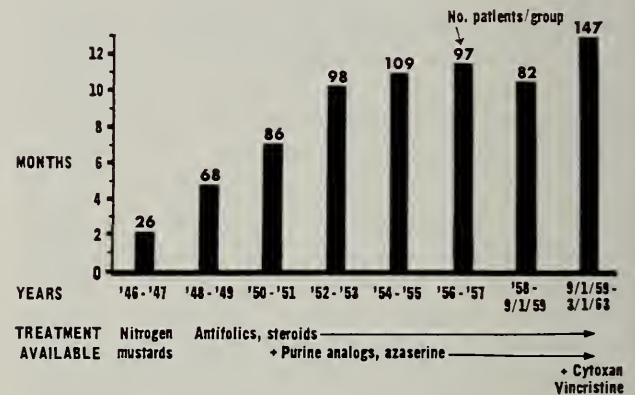


Figure 1. Survival in children with acute leukemia is plotted against year of introduction of useful chemotherapeutic agents.<sup>11</sup> (Courtesy of the *Journal of the American Medical Association*.)

Yes, progress has been made in the treatment of leukemia during the past 20 years. However, much remains to be done. We still cannot cure leukemia or, better yet, prevent its development. It is just a matter of time, however, until these feats are accomplished. ★★★

415 South 28th Ave.

This investigation was supported (in part) by a Public Health Service Traineeship (Number CST 15364(65)) from the Cancer Control Program, Public Health Service.



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## PEACE OFFENSIVE

A young beatnik, reporting for physical examination for the draft, approached the psychiatrist and said: "Take me now! Send me straight to Viet Nam. I want to kill the enemy in hand-to-hand combat! Send me now. I am strength! I am power!"

The physician looked puzzled and said: "You're crazy."

"Write it down," responded the beatnik. "Write it down!"

# Radiologic Seminar LII:

## Ureterocele

WAYMOND L. RONE, M.D.  
Jackson, Mississippi

URETEROCELE is a distortion of the ureteral orifice and adjacent ureter, manifested as a dilatation of the distal end of the ureter with protrusion into the bladder. It may be congenital or acquired, and is more common in females than males. It is thought to result from a combination of ureteral stenosis plus a deficiency in the connective tissue attachment of the ureter to the bladder.

Ureteroceles are usually classified as simple or ectopic. Simple ureteroceles are contained entirely within the urinary bladder wall and arise in a ureter which opens in a fairly normal position in the bladder. These are more commonly detected in adults. Ectopic ureteroceles arise in a ureter which opens into the urethra, are usually associated with duplication of the upper drainage tracts, and are most commonly observed in female infants. The pathologic changes resulting with ureterocele are secondary to obstruction, stasis, and subsequent infection. It can vary in size from barely perceptible to a large lesion that fills the major portion of the bladder.

Ureteroceles are usually demonstrable on ex-

cretory urograms. Radiographically, they are seen classically as a dilated terminal portion of the ureter, projecting partially into the bladder, giving a bladder defect which is frequently described as having a "cobra head" or "spring onion" effect. A radiolucent line surrounds the defect, separating the opaque media within the ureter from the media in the bladder. If by chance the ureter contains no media, the defect may be confused with a nonopaque bladder calculus, bladder tumor, or possibly gas in the rectum. Treatment is directed toward enlarging the ureteral orifice or incising the thin wall of the ureterocele through a cystoscope. ★★★

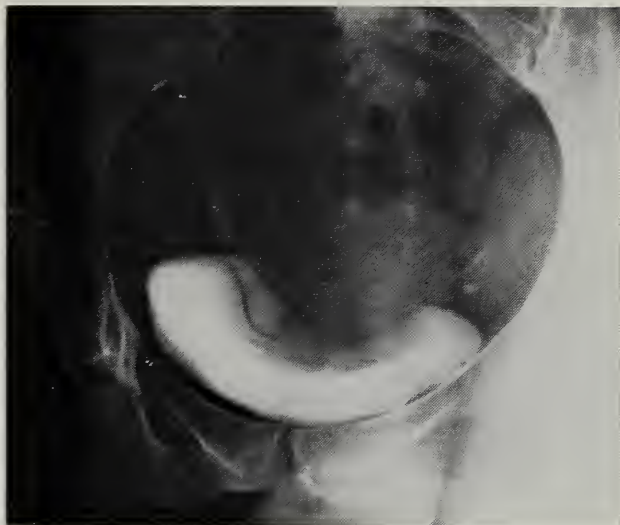
1850 Chadwick Drive

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Sponsored by the Mississippi Radiological Society.  
From the Department of Radiology, Hinds General Hospital.





*Figures 1 and 2. Excretory urogram, demonstrating a right ureterocele with typical negative halo surrounding the filling defect in the bladder. Some degree of obstruction is indicated by the dilatation of the distal end of the ureter. The uterus is exerting a pressure effect on the dome of the bladder.*

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## THE AGONY AND THE ECSTASY

Said the artist sadly to a friend: "It took me 10 years to realize that I have absolutely no talent for painting."

"Then I assume that you'll quit," said the friend.

"Oh, no, I can't," was the reply. "I'm too famous and successful."

# Clinicopathological Conference LXXIX

From the Department of Pathology  
St. Dominic-Jackson Memorial Hospital  
Jackson, Mississippi

*Dr. Robert R. Gatling:* "This 36-year-old white woman was admitted Dec. 29, 1961, to St. Dominic-Jackson Memorial Hospital complaining of left thoracic pain, right upper quadrant abdominal pain and a 'cold.' Symptoms of a respiratory infection began four days prior to admission and became progressively worse. Severe left-sided chest pain, exaggerated by respiratory movements and cough, developed on the day of admission. Previous admissions: She was hospitalized here for two days in 1956 because of lumbosacral sprain, seven days in 1957 with asthmatic bronchitis, seven days in 1959 with asthmatic bronchitis and external otitis, and underwent hysterectomy in 1960 as treatment of endometrial polyp and pelvic adhesions.

"Physical examination revealed the temperature to be 99.4°, pulse 96 per minute, respirations 26 per minute, and blood pressure 100/80. The respirations were short and rapid. No rales or pleural friction rubs were audible. The heart was regular; no murmurs or pericardial friction rubs were audible. Right upper quadrant tenderness in the area of the gallbladder was elicited. Neurological examination was described as within 'normal limits.' Admitting diagnoses were (1) possible pneumonia with pleurisy and (2) possible cholecystitis.

"Hematology report showed hemoglobin 13.1 gm. per cent, hematocrit 38 per cent, WBC 8,500. The differential count revealed neutrophils 73 per cent, lymphocytes 25 per cent, monocytes 1 per cent and basophils 1 per cent. On Dec. 30, the 1-stage prothrombin time was 70 per cent normal; on Dec. 31, it was less than 10 per cent normal and on Jan. 1, less than 10 per cent normal. Blood chemistry on Dec. 31 showed SGOT 215

units and LDH 2,000 units; chloride 96 mEq. per liter, potassium 5.0 mEq. per liter, sodium 138 mEq. per liter and BUN 39 mg. per cent. VDRL was nonreactive. Chest x-rays made the day following admission were reported as showing slight left ventricular enlargement and clear lung fields. Electrocardiograms (Figure 1) were interpreted as indicative of massive anterior myocardial infarct.

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*The patient in CPC LXXIX is a 36-year-old woman admitted with a complaint of left thoracic pain, right upper quadrant abdominal pain and a "cold." Discussers are Drs. Robert R. Gatling and J. P. Melvin.*

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"I have asked Dr. Melvin if he would discuss the electrocardiograms at this time. I'd like to add that he has never seen these tracings before this conference."

*Dr. J. P. Melvin:* "This electrocardiogram dated Dec. 30, 1961 (Figure 1), shows a sinus tachycardia with an inter-ventricular conduction defect, probably of the right bundle branch type. R and R-prime positive deflections are seen in leads V-1, V-2 and V-3, and the R-wave is quite small as the leads progressed over the left precordium, becoming quite embryonic in leads V-5 and V-6. However, the R-wave is always present, and the classic picture of myocardial infarction is not particularly suggested. An electrocardiogram dated Dec. 31, 1961 (Figure 2), is even more bizarre. At this time complete A-V dissociation is present, and the inter-ventricular conduction block is of



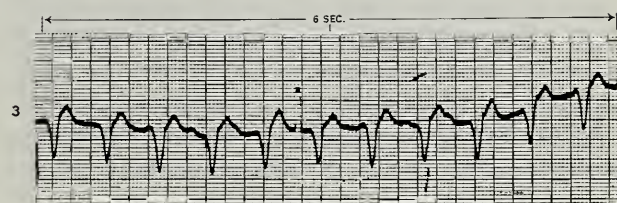
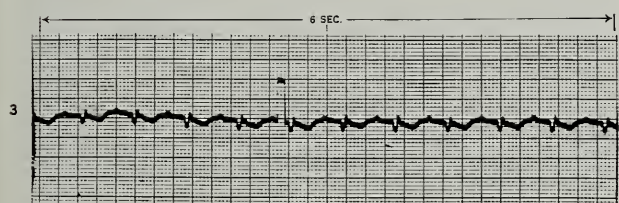
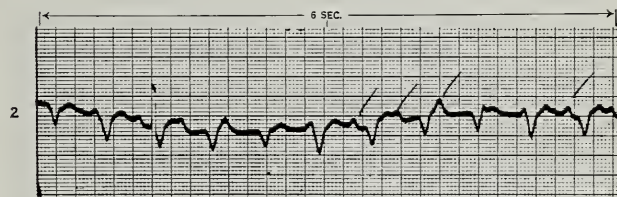
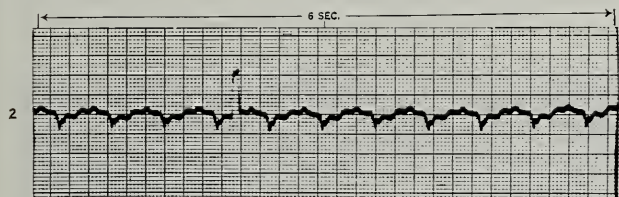
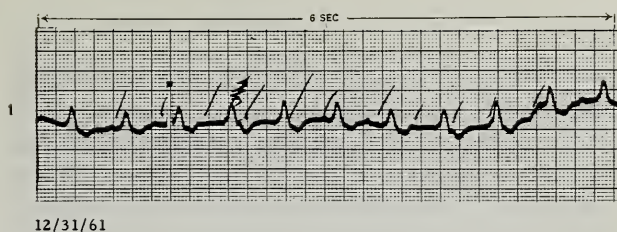
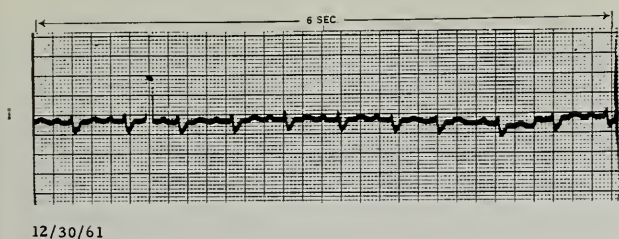


Figure 1. Electrocardiogram made one day following admission. Leads V-1, V-2 and V-3 support the changes illustrated here.

Figure 2. Electrocardiogram made two days following admission illustrating more bizarre changes than those present in Figure 1.

the left bundle type. This combination of inter- and A-V blocks with wide slurred and notched QRS complexes in a young woman are almost pathognomonic of a diffuse myocardial process such as a myocarditis."

### CONSULTATION REPORT

*Dr. Gatling:* "A consultant's report on the day following admission described her as representing 'typical story of coronary insufficiency with angina on exertion.' He also interpreted her complaints as representing nocturnal angina and paroxysmal nocturnal dyspnea and the electrocardiogram as indicative of 'massive anterior myocardial infarct.'

"Following admission she complained of nausea and experienced occasional episodes of vomiting. While being transported to x-ray on the day following admission, she complained of being weak, following which the blood pressure was recorded as 80/60. Because of hypotension, an intravenous drip containing Levophed was begun. In spite of treatment, the blood pressure remained around 70-90/0.

"On Dec. 31 (two days following admission) she was thought to be in advanced failure with hopeless prognosis. A state of clinical shock was evident and persisted. On the fourth hospital day

she was described as being in chronic shock with 'fibrillation.' No significant improvement was observed, and she expired at 12:40 a.m. at the beginning of the fifth hospital day. Temperature elevation reached 99° on the second hospital day but spiked to 101° on the third and to 103° on the fourth day. Respirations varied between 24 and 40 per minute. In addition to cardiovascular stimulants she received terramycin, Digoxin, anticoagulants, sedatives, nasal oxygen, and other symptomatic measures.

"At autopsy the significant findings were in the lungs and heart. The lungs weighed 1080 gm. and 1090 gm. respectively, approximately three times the normal weight. Increased weight was due to congestion and edema. Blood-tinged edema fluid literally dripped from the cut surfaces. On microscopic examination the alveolar ducts were dilated, lined by prominent hyaline membranes and contained proteinaceous edema fluid with few cells (Figure 3). These are identical with the lesions described by Goodpasture during the 1918 pandemic of 'Spanish flu'<sup>1</sup> and more recently by Kilbourne and associates following the 1957 outbreak of 'Asian flu.'<sup>2</sup> Pulmonary tissue was frozen and sent to Communicable Disease Center for viral studies, but no virus was isolated. This



is not surprising since autopsy was performed seven hours post mortem, and the disease had existed nine days prior to death. Inability to identify the agent does not eliminate the influenza virus as a cause. *Escherichia coli* was cultured from the lungs but was regarded as a component of bacteremia occurring during the state of shock.

### BRONCHUS AND VESSELS

"This section of bronchus is devoid of epithelium, and the vessels of the lamina propria are markedly congested. These findings are similar to those described by Kilbourne, *et al.*, in reporting their material.

"In my opinion, the alterations of the lungs were of sufficient degree to cause death, but another important lesion was present. The heart was moderately enlarged, weighing 450 gm., and was the site of widespread interstitial exudate of lymphocytes and monocytes (Figure 4). These slides illustrate the fairly wide separation of the

muscle fibers by cellular exudate of lymphocytes and monocytes and edema fluid. Granulocytes are infrequent, if present at all. Occasional muscle fibers are degenerating, and one subendocardial area from the right ventricle is characterized by extensive fiber degeneration. This slide illustrates the change. In most areas, however, the fibers are well preserved. Muscle fiber necrosis appears to be secondary to inflammation and not due primarily to vascular insufficiency. The increased weight of the heart could be accounted for by edema and cellular exudate. The coronary arteries were widely patent throughout, and no evidence of insufficiency, old or recent, was present.

"The liver was moderately enlarged, weighing 2050 gm. Increased weight could be accounted for on the basis of congestion. This slide (Figure 5) illustrates extensive central lobular necrosis present throughout the liver. Although central necrosis can be produced by other etiologies, a prolonged state of shock such as this patient experienced is sufficient to explain its presence. Intravenous Levarterenol may also initiate this

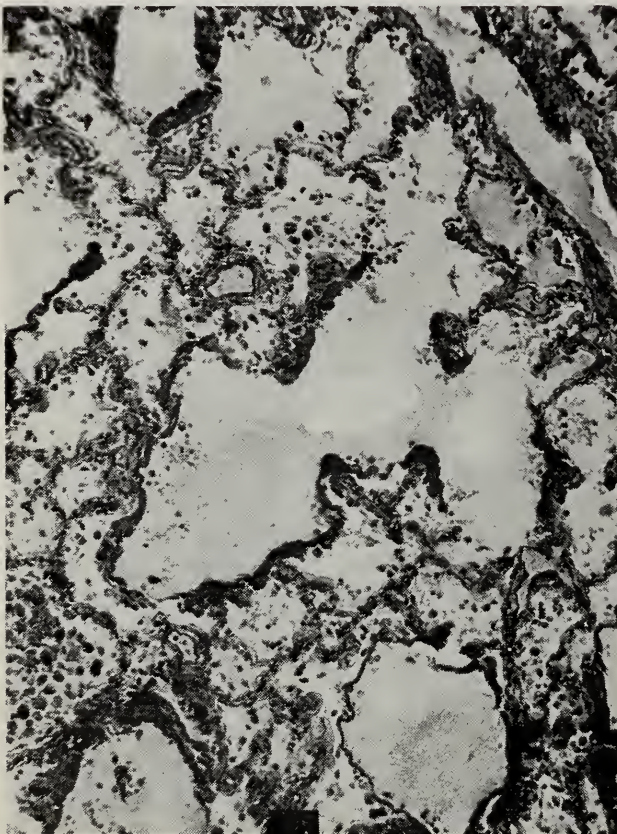


Figure 3. Lung. Dilated alveolar ducts are filled with proteinaceous fluid. The black lining membrane stained eosinophilic as fibrin with hemotoxylin and eosin stain. Hemotoxylin and eosin stain.  $\times 100$ .



Figure 4. Myocardium. Interstitial myocarditis. The muscle fibers are separated by edema fluid and an exudate of lymphocytes and monocytes. Hemotoxylin and eosin stain.  $\times 100$ .



alteration and must be considered as possible contributing factor. Prolonged hypoxia associated with hypotension no doubt plays an important part in inducing central lobular necrosis.

"The esophagus was extensively autolyzed and had perforated into the left pleural cavity, but the absence of evidence of inflammation about the site suggests that perforation occurred during the late agonal period. No evidence was found that this was a significant factor in causing death.

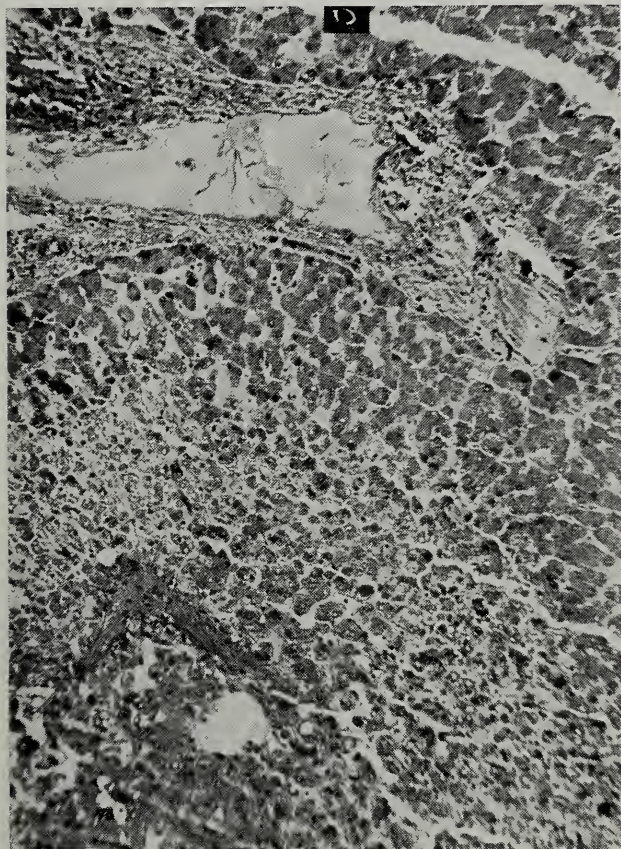


Figure 5. Liver. Central lobular necrosis. Cytoplasmic vacuolization, coagulation necrosis and nuclear pyknosis characterized the central portion of the lobule occupying the lower half of the photograph. Hemotoxylin and eosin stain.  $\times 100$ .

"Final Anatomic Diagnoses:

"1. Pneumonitis, consistent with influenzal viral pneumonitis.

"2. Interstitial myocarditis, severe.

"3. Acute tracheobronchitis.

"4. Esophageal perforation, agonal.

"5. Passive congestion of liver with central lobular necrosis.

"No acute inflammatory cells were present within the myocardium, but this is not unusual in interstitial myocarditis associated with viral infection. Interstitial myocarditis can be initiated by viral infections, on occasion, and that seems to be what occurred in this case. Difficulty is experienced in ascertaining the relative importance of myocarditis on the one hand and toxemia from viral pneumonitis on the other hand in initiating and perpetuating the state of circulatory failure (shock). Dr. Melvin will comment further on the clinical and electrocardiographic findings a little later.

"Concerning the laboratory data, absence of leukocytosis in the presence of an overwhelming viral infection is not surprising. Moderate elevation of SGOT and lactic dehydrogenase may have been contributed to by both myocardial fiber necrosis and central lobular necrosis of the liver. BUN elevation to 39 mg. per cent was no doubt the result of circulatory failure on renal function (pre-renal azotemia). Renal failure was more a result of the dying process rather than a cause of it.

"Dr. Melvin, will you make some concluding remarks concerning the electrocardiographic and clinical aspects of this case?"

Dr. Melvin: "After seeing the slides from this case and hearing the pathologist's description of the gross and microscopic anatomy, one could easily correlate this electrocardiogram with the pathological findings. At no place was there any transmural area of hemorrhage, edema or necrosis compatible with myocardial infarction, either secondary to coronary occlusion or related to localized but extremely severe inflammatory reaction. The inflammatory process being widespread and involving atria, conduction tissue and ventricles correlates physiologically with the variable type of conduction defect and particularly with the finding of A-V dissociation."

★★★

969 Lakeland Dr.

## REFERENCES

1. Goodpasture, E. W.: The Significance of Certain Pulmonary Lesions in Relation to the Etiology of Influenza, *Am. J. M. Sc.* 158:863, 1919.
2. Kilbourne, E. D., *et al.*: Studies on Influenza in the Pandemic of 1957-58. I. An Epidemiologic, Clinical and Serologic Investigation of an Intrahospital Epidemic, with a Note on Vaccination Efficacy, *J. Clin. Invest.* Part II, 38:199, 1959.

# Maternal Mortality in Mississippi During 1964

MICHAEL NEWTON, M.D.  
Jackson, Mississippi

THE DETAILED ANALYSIS of deaths occurring in women during or within 90 days after pregnancy is of continuing value in pointing up ways in which this tragic loss of life can be reduced. The present report is the eighth in a series of annual studies undertaken by the Committee on Maternal and Child Care of the Mississippi State Medical Association. Data for the calendar year 1964, collected in a similar manner as before, are presented and compared with those for 1963 and, when appropriate, with those for prior years.

In 1964 the number of maternal deaths rose to 56, the highest total since 1960 and 15 more than in 1963. The number of live births in the state fell from 57,316 in 1963 to 56,717 in 1964.

TABLE 1  
STUDY MATERIAL

	1963		1964	
	NO.	PER CENT	NO.	PER CENT
Total cases . . . . .	41		56	
Replies received . . . .	35	85.4	46	82.1
Replies usable . . . . .	29	70.7	42	75.0

Thus, the maternal mortality rate (maternal deaths per 10,000 live births) rose from 7.2 to 9.9. This represented a rise in the white maternal mortality rate from 3.4 to 3.5 and a rise in the nonwhite maternal mortality rate from 10.5

to 15.3. The reason for this change is not apparent.

There was a slight decrease in the percentage of replies received to the committee's inquiries, but more replies were usable (Table 1). The quality of the replies was not quite as good (Table 2),

TABLE 2  
ADEQUACY OF DATA

Category	1963		1964	
	NO.	PER CENT	NO.	PER CENT
5 . . . . .	1	3.4	3	7.1
4 . . . . .	7	24.2	6	14.3
3 . . . . .	6	20.7	6	14.3
2 . . . . .	14	48.3	18	42.9
1 . . . . .	1	3.4	9	21.4

the mean adequacy being 2.43 as compared with 2.76 in 1963. These changes are only of significance in that they suggest a fairly stable pattern of effectiveness in the committee's present efforts. The proportion of deaths considered to be due to the complications of pregnancy itself (direct obstetric deaths) was slightly lower than in 1963 (Table 3). The five cases in which the cause of death could not be determined illustrate the difficulty that the committee continues to have when information is scanty or when the physician has seen the patient only for a short time before death or even after death.

Among the direct obstetric deaths, the number due to hemorrhage fell again to the level observed consistently throughout the eight years of study, but the absolute and proportionate number of deaths from toxemia and infection rose (Table 4).

Chairman, Committee on Maternal and Child Care,  
Council on Medical Service, Mississippi State Medical  
Association.

Dr. Newton is now director of the American College of  
Obstetrics and Gynecology, Chicago, Ill. 60603.



The percentage of deaths considered avoidable by the committee was about the same as for 1963 (Table 5). Analysis of the 35 cases in which avoidable factors (attributable to physician, hospital or patient) were identified by the committee showed that one such factor was considered to be operative in 22 cases, two factors in 11 and three factors in two cases. Of the total of 50 avoidable factors determined, 23 were attributed to the physician, 22 to the patient and 5 to the hospital (Table 6). In other words, avoidable factors involving the physician were identified in 23 (66 per cent) of 35 avoidable maternal deaths.

COMMENT

During and subsequent to the year under study the committee has been concerned with methods of improving the collection of data on maternal deaths and the quality of the information received. These efforts have included first, securing initial information on the maternal death more quickly;

TABLE 3  
CAUSES OF DEATH

	1963		1964	
	NO.	PER CENT	NO.	PER CENT
Direct obstetric . . . .	27	93.1	31	73.8
Indirect obstetric . . .	2	6.9	6	14.3
Unrelated . . . . .	0	—	0	—
Undetermined . . . . .	0	—	5	11.9

second, notification of hospital administrators of the importance of the study and supplying them with data sheets in the hope that these may be filled out more promptly, and, third, in selected areas of the state, co-opting specific and knowledgeable physicians as consultants to the committee: such physicians may be utilized in an attempt to obtain complete data when such information

TABLE 4  
CAUSES OF DIRECT OBSTETRIC DEATHS

	1963		1964	
	NO.	PER CENT OF ALL DEATHS STUDIED	NO.	PER CENT OF ALL DEATHS STUDIED
Hemorrhage . . . . .	16	55.2	14	33.3
Toxemia . . . . .	5	17.2	9	21.4
Infection . . . . .	3	10.3	6	14.3
Vascular accidents . .	2	6.9	1	2.4
Anesthesia . . . . .	1	3.4	0	—
Other . . . . .	0	—	1	2.4

would be of great value. The effectiveness of these measures remains to be seen.

At this point in the committee's studies the three areas in which avoidable factors may be

TABLE 5  
AVOIDABILITY

	1963		1964	
	NO.	PER CENT	NO.	PER CENT
Avoidable . . . . .	25	86.2	35	83.3
Non-avoidable . . . . .	3	10.4	3	7.2
Undetermined . . . . .	1	3.4	4	9.5

identified according to the *Outline for Maternal Death Studies*, published by the American Medical Association, deserve individual consideration. First, it is apparent that detailed attention to the management of hemorrhage and toxemia by all physicians taking care of pregnant women would do much to improve the situation. Second, the failure of the patient to seek antepartal care remains a significant factor avoidable by the patient (11 cases received no care and 7 very inadequate care in 1964). In many instances (although there were a few in which this may not have been true), this care was available and almost certainly known to the patient. But it was not sufficiently effective or attractive to her to motivate her to seek it actively. Although the

TABLE 6  
AVOIDABLE FACTORS

	1963		1964	
	NO.	PER CENT	NO.	PER CENT
Professional . . . . .	15	45.4	23	42.6
Hospital . . . . .	4	12.1	5	9.3
Patient . . . . .	12	36.4	22	40.7
Undetermined . . . . .	2	6.1	4	7.4

committee has consistently regarded this as an avoidable factor on the part of the patient, this view is open to some question, since the purveyors of medical care have a responsibility to make it acceptable to the type of people who need it most. Third, although few hospital factors were specifically identified, these problems tend to be concealed. For example, it is clear that in many areas of the state, hospital beds for obstetrical delivery are simply not available to indigent patients. Although this is actually an avoidable hospital factor, it is not listed as such but is often

attributed either to the patient (did not seek hospital care) or to the physician (did not recommend early hospitalization).

It would appear reasonable to make three recommendations from the above observations.

1. That serious attention be given as part of the over-all postgraduate education program in the state to specific and detailed instruction in the management of hemorrhage and toxemia by physicians.

2. That detailed attention be given to methods of providing antepartal care that is attractive to indigent patients.

3. That a survey be made of available hospital maternity facilities in the state with the objective of indicating deficiencies, consolidating ser-

vices to provide greater efficiency and provision, if indicated, of more obstetric beds.

## SUMMARY

1. Fifty-six maternal deaths occurring in Mississippi during 1964 have been studied by the Committee on Maternal and Child Care.

2. Forty-two of the 1964 maternal deaths on whom adequate data were received by the committee have been analyzed and the data obtained have been compared with those for previous years.

3. Plans are being put into effect for obtaining better information on maternal deaths.

4. Specific recommendations are made regarding physician education, provision of antepartal care for indigent patients and a survey of maternity facilities in Mississippi hospitals. ★★★

79 West Monroe St.

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## HIS SISTER'S KEEPER

Weary of her husband's coming in every Friday night thoroughly inebriated, the wife decided to scare him into sobriety. Waiting for him just inside the front door one such evening, she wore a sheet covering her completely. As the happy husband entered staggering, she gave a wailing screech.

"Who are you?" asked the bleary-eyed husband.

"I am the devil," replied the wife.

"Shake hands, buddy," said the husband. "I'm married to your sister."



# Proceedings of the House of Delegates

Jackson, Mississippi  
98th Annual Session  
May 9-12, 1966

THE 63RD ANNUAL SESSION of the House of Delegates was convened during the 98th Annual Session of the Mississippi State Medical Association, in pursuance to lawful notice given, on May 9, 1966, in the Victory Room of the Hotel Heidelberg at Jackson, Mississippi, at 9:27 o'clock in the morning, by Dr. Everett Crawford, the President. The invocation was spoken by the Rev. Dr. Clayton Sullivan, Pastor of the Tylertown Baptist Church, Tylertown, Mississippi.

After extending greetings, Dr. Crawford presented the Vice Speaker of the House of Delegates, Dr. William E. Lotterhos of Jackson, and the Speaker, Dr. Howard A. Nelson of Greenwood, who assumed the chair. Dr. James L. Royals, Chairman of the Reference Committee on Credentials, reported the presence of a quorum of registered and seated delegates in accordance with Section 3, Chapter V, By-Laws of the association.

## ANNOUNCEMENT OF REFERENCE COMMITTEES

### Reports of Officers and Board of Trustees

Lawrence W. Long, Jackson, Chairman  
G. Spencer Barnes, Columbus  
R. J. Field, Jr., Centreville  
John F. Lucas, Greenwood  
Victor E. Landry, Lucedale

### Medical Practices

Mal S. Riddell, Jr., Winona, Chairman  
John G. Archer, Greenville  
Temple Ainsworth, Jackson  
Leo J. Scanlon, Jr., Natchez  
Omar Simmons, Newton

### Miscellaneous Business

Jack A. Atkinson, Brookhaven, Chairman  
Eldon L. Bolton, Biloxi  
George E. Gillespie, Jackson  
Jo N. Robinson, Columbus  
James P. Wood, Waynesboro

### Credentials

James L. Royals, Jackson, Chairman  
B. B. O'Mara, Biloxi  
James O. Gilmore, Oxford

### Rules and Order of Business

S. Lamar Bailey, Kosciusko, Chairman  
Archie C. Hewes, Gulfport  
A. Wayne Sullivan, Meridian

## APPOINTMENT OF TELLERS AND SERGEANTS-AT-ARMS

John D. Egger, Drew, Chairman  
A. A. Derrick, Jr., Durant  
Leo J. Scanlon, Jr., Natchez

## REPORT OF THE REFERENCE COMMITTEE ON RULES AND ORDER OF BUSINESS

To assist the Speaker and Vice Speaker in the orderly conduct of the proceedings of this House of Delegates, your Reference Committee on Rules and Order of Business makes the following recommendations:

*Conduct of Business.* The business of the House should be conducted according to *Robert's Rules of Order, Revised* and the Speaker and Vice Speaker should prescribe the order of business as set out in the By-Laws. To insure proper recording of the transactions, all delegates recognized should identify themselves. Except for distinguished visitors and those having official capacity in the association, unanimous consent should be obtained for extending the privilege of the floor to non-members of the House of Delegates. The report of the Reference Committee on Credentials should constitute the formal roll call.

*Reports.* All reports and resolutions presented should be referred to the appropriate reference committee by the chair immediately after their presentation, the only exception being those which are of such a nature as to require no further consideration and are, therefore, ready for decision

## HOUSE OF DELEGATES / Continued

by vote of this House. Reports should be identified by title and number. Debate should be reserved until such time as the reference committees conduct formal hearings and when they report to this House.

*Resolutions.* To avoid burdensome tasks upon the reference committees and to insure that all interested members have adequate opportunity to discuss their views, the House should permit no introductions of resolutions after the present meeting except for (1) matters of an emergency nature, the validity of such emergency to be determined by majority vote, (2) matters relating to a scientific section or scientific work, and (3) proposed amendments to the Constitution and/or By-Laws which must lie on the table for one year.

The report of the reference committee was adopted.

### ADOPTION OF TRANSACTIONS

On motion by Dr. Stanley A. Hill of Corinth, seconded by Dr. C. D. Taylor, Jr., of Pass Christian, the Transactions of the 62nd Annual Session of the House of Delegates, 97th Annual Session of the association, May 10-13, 1965, Biloxi, published in Volume VI, Number 8, JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION, August 1965, were adopted.

On motion by Dr. Stanley A. Hill of Corinth, seconded by Dr. C. D. Taylor, Jr., of Pass Christian, the Transactions of the Special Session of the House of Delegates conducted December 16, 1965, at Jackson, published in Volume VII, Number 2, JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION, February 1966, were adopted.

### REMARKS OF THE SPEAKER

*Dr. Howard A. Nelson:* As we, the representative governing body of our profession in our state, are convened for the 63rd time in our association's 110th year, we assemble as witnesses of dramatic events. Most are not of our making. Many are not to our liking. A few we find disheartening. But we are neither unrealistic nor unprepared to carry on in the best traditions of 25 centuries of ethical healing.

Your speaker does not frame his greeting to you in a black wreath of despair, because we are met for good and worthy purposes. We come to this occasion of professional profit and fraternal gathering wishing no man ill, seeking no goal without merit, finding no fault without reason.

With the warmest of greeting, your speaker welcomes you, the constitutionally designated

delegates of our Mississippi State Medical Association, to your 98th Annual Session. We are here to work, and work we will—for the good of our patients, our profession, our association, our state, and our nation.

Ours is the task of reviewing the labors and fruits of our leadership and official bodies. They bring before us the accounting for substantial endeavor in our behalf. We shall have before us also new proposals which will be weighed and fairly judged in gentlemanly debate. Then we will combine our best efforts, our jointly exercised wisdom, and our representative views to chart our course for the new association year.

It has long been the belief of your speaker that we work together in the policy and socioeconomic areas of medicine as a state medical association for the sole reason of doing together what none of us could possibly do alone. Thus, we enjoy the benefits of many widely divergent labors, the gathering and distilling of much information, and the specialized thinking of official bodies in many areas of relevant interests.

In this House of Delegates, we have, therefore, not only an opportunity for service without parallel, but we also have an unparalleled opportunity to learn and lead.

As we go out on this serious and worthy mission, let us conduct ourselves in such a manner as to insure the success of the annual session. Your speaker and vice speaker will devote themselves to the full extent of their resources in the just and fair guiding of your deliberations. We will not encroach upon your prerogative to say what you wish nor to decide as you will. But we will have great concern over the manner and means by which you exercise these rights and duties. It will be our purpose to assure the rights of the minority of one as the will of the majority is carried out. Past experience, happily enough, gives us all assurance that our environment of mutual respect is such as to make the duty of the chair a pleasure.

Let us be relevant and germane in discussion of all issues before us in debate. If an occasion for a ruling in this connection should arise, it will be made promptly. With equal promptness, any challenge of the ruling will be heard and acted upon.

Let us keep our parliamentary procedures simple and direct, so that all may have a full understanding at every step in the decision process. Let us avoid a tangle of motions which really impede the orderly process of the free exercise of judgment.

Let us all take full advantage of the revised format of our meeting and participate in the



reference committee hearings which are so scheduled as to avoid conflicting with our scientific meetings. We thus reserve our debate, for the most part, to these hearings. There, we have the added advantage of the privilege of the floor for any member of the association, whereas only a member of the House may speak on this floor with rare exception.

Floor debate in the House of Delegates is assuredly in order, but the time of many is sometimes needlessly taken when there is repetitious debate in this House by those who did not attend the reference committee hearings. Let us assist and support our reference committees in their quest to arrive at a true and fair consensus by being present to discuss our views.

Your speaker and vice speaker hope that the revisions in format and the various innovations we have made are useful and valuable to you. We place ourselves at your service during the entire annual session.

May we now enter upon our deliberations with full sense of the high responsibilities we carry, and may we discharge these with pride and merit.

#### REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee appreciates the remarks of the Speaker and his constructive suggestions for the conduct of our business. In approving his report, we commend him and our able Vice Speaker for the fair and impartial manner in which they preside over the conduct of business.

The report of the reference committee was adopted.

#### PRESENTATION OF DISTINGUISHED GUESTS

The Speaker presented the following distinguished guests and members of the association:

Dr. J. C. Woosley, Jackson, President, Mississippi Hospital and Medical Service, Inc.

Mr. George W. Butler, Jackson, Vice President, Mississippi Hospital and Medical Service, Inc.

Mr. Charles W. Flynn, Jackson, Executive Director, Mississippi Hospital Association.

Mr. Whalen M. Strobhar, Chicago, Field Representative, American Medical Association.

Mr. Robert F. Etheridge, Chicago, Department of Medicine and Religion, American Medical Association.

Dr. R. B. Caldwell, Baldwin, Past President of the association, who was attending his 50th annual session in the past 52 years.

Dr. George F. Lull, Chicago, the only Honorary Member of the association.

#### ADDRESS OF THE PRESIDENT

The Speaker declared the House of Delegates in open session, and the President, Dr. Everett Crawford, delivered his address. The address has been published separately in Volume VII, Number 7, JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION, July 1966.

#### REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee commends Dr. Everett Crawford, our President, for his diligence and devotion to his duties during the 1965-66 association year. His tenure of service has been characterized by his promptness, cheerfulness, and willingness to work with all official bodies of our association.

In approving the report of the President, your reference committee calls attention to one portion, "We have a valuable, near-priceless possession in our guild relationship, the professional society. We have versatility, capability, resource, and flexibility. There is a place for everybody's talent and time where its gift benefits many and the profession itself. Let us remember that our achievements are legion and that when we fail, we have failed together."

We ask that the House associate itself with your reference committee in this commendation and for our President's carrying on in the finest traditions of our association.

The report of the reference committee was adopted.

#### SPECIAL ADDRESS

Dr. James Z. Appel of Lancaster, Pennsylvania, President of the American Medical Association, addressed the House of Delegates.

#### REPORT OF THE COUNCIL ON CONSTITUTION AND BY-LAWS

*Dr. E. LeRoy Wilkins: Pending Amendments.* At the 97th Annual Session in 1965, a proposal was presented to the House of Delegates to abolish the degree of Scientific Membership. This involves amendment both to the Constitution and the By-Laws. Specifically, these amendments are:

*Article IV, Section 1 of the Constitution:* Amend the first sentence to read "Members of the Mississippi State Medical Association. Members shall be active, associate, or emeritus," deleting "scientific."

*Chapter I of the By-Laws:* Amend Section 3 so that the first sentence reads "Degrees of Membership. Members of the Mississippi State Medical Association shall be divided into the following

## HOUSE OF DELEGATES / Continued

classifications: Active, emeritus, and associate," deleting "scientific."

Delete altogether Section 3(d) of Chapter I which prescribes Scientific Membership.

Delete altogether Section 4 (h) of Chapter I which prescribes registration of Scientific Members at any session of the association.

Amend Section 3, Chapter XII of the By-Laws to delete that portion which now reads "provided scientific members shall also qualify under Chapter I, Section 3, subsection (d) of the By-Laws."

*Publication to Component Medical Societies.* As required by Article XII of the Constitution, notice of the proposed amendments was sent to the component medical societies of the association on February 15, 1966, or more than 60 days prior to the session at which final action is to be taken.

*Hearing.* Your Council on Constitution and By-Laws will sit as a reference committee to hear discussion from any member of the association on these and any other amendments which may be proposed. Final recommendations will be reported to the adjourned meeting of this House of Delegates for consideration.

### REPORT OF THE COUNCIL ON CONSTITUTION AND BY-LAWS

Your Council on Constitution and By-Laws, sitting as a reference committee of this House of Delegates, received by referral three items of business. We appreciate those members of the association who appeared before us to discuss the proposed amendments to the Constitution and By-Laws.

*Deletion of Scientific Membership.* At the 97th Annual Session in 1965, the Board of Trustees introduced Supplemental Report D which would abolish the degree of scientific membership. This involves amendments to Article IV, Section 1 of the Constitution and Chapters I and XII of the By-Laws.

Your Council concurs with this proposal and recommends that these amendments be adopted.

*Committees of the Council on Medical Service.* Mr. Speaker, the Council on Medical Service recommended that the Committees on Cancer Control, Diseases of the Heart, Aging, and Federal Medical Services be discontinued as constitutional bodies of the association. Because of overlapping functions and duties and because members of these committees continue to serve in their respective spheres of interest with other organizations, there has been no occasion for their having meetings or conducting business during the past

few years. The Council on Medical Service has assured the association that where the need arises, committees will be appointed on an *ad hoc* basis to conduct any such business as may be necessary and pertinent.

Your council, therefore, recommends that Chapter IX, Section 2 of the By-Laws be amended to delete these committees as recommended in the Report of the Council on Medical Service.

The report of the council, acting as a reference committee, was adopted.

### REPORT OF THE BOARD OF TRUSTEES

*Dr. John B. Howell, Jr.: Organization and Duties.* The Board of Trustees is the executive and governing body of the association during vacation of the House of Delegates. It is additionally charged with the duties and responsibilities prescribed by law for directors of corporations. In the discharge of these duties, the Board has conducted eight formal meetings over a period of nine meeting days since the 97th Annual Session: In May, August, November, and twice in December of 1965, and in February, April, and May of 1966. This annual report relates to referrals from the House of Delegates and to management and policy functions in connection with Board-supervised programs and overall responsibilities.

*Referrals From the House.* Matters referred to the Board of Trustees from the House of Delegates at the 97th Annual Session include:

(a) *Loss of Narcotics Stamps.* After amending the By-Laws to require, as a precondition to membership, a currently valid federal narcotics stamp with certain stated exceptions, the House asked that "the Mississippi State Board of Health establish a close liaison with respect to loss of narcotics stamps by physicians and that there be a free exchange of information in this connection." Where indicated and necessary, this information has been exchanged. In addition, subscriptions to the *Federation Bulletin*, the official monthly publication of the Federation of State Medical Boards of the United States, have been arranged for association leaders and the headquarters office. Actions as to probation, suspension, and revocation of licenses to practice medicine are now published to the secretaries of component medical societies in the Monthly Directory Supplement. The Board believes that this communications matter has been satisfactorily resolved.

(b) *Medical Care for the Indigent.* When this House approved the Board's Supplemental Report A at the 97th Annual Session with reference to medical care for the indigent, the House asked that "the Board continue to study this matter in



the light of pending legislation before the Congress." Five recommendations, three addressed to the State Hospital Commission, one to the Mississippi Hospital Association, and one addressed jointly to the commission and hospital association, were adopted. The Board assigned the task of presenting the recommendations to the MSMA-Mississippi Hospital Association Liaison Committee. The hospital association concurred with the medical association that patients with voluntary prepayment or health insurance should be admitted as private patients and not under the SHC program. The State Hospital Commission agreed to the recommendations and issued the following policy statement which, in effect, amended its administrative regulations:

"The Mississippi State Hospital Commission recognizes that the individual physician has the right to participate or not to participate in any given case coming under the indigent care program, and

"The Commission welcomes suggestions and recommendations from the Mississippi State Medical Association in connection with regulatory policies and administrative procedures adopted by the Commission."

During subsequent consideration of the study on care of the indigent and the results of conferences with the hospital association and State Hospital Commission, the Board took the position that Section 7144.3 of the State Hospital Commission Act which forbids a physician to "knowingly charge, accept, or retain any fee for medical or surgical services rendered . . ." patients admitted under the program should be repealed. This action was deemed especially pertinent in view of the provisions of Part 1-A of Medicare which will liberalize and largely supplant this purely state program. Bills are pending in the House and Senate of the Mississippi Legislature to make such a revision. It should be fully understood that Section 7144.3 does not operate to the compensatory disadvantage of the physician on Medicare patients.

The Board believes that the intent of the 1964 resolution, the study, and instructions of the House of Delegates has been carried out.

(c) *Prairie Medical Society*. After proper petition and approval in behalf of physicians in Clay, Lowndes, Oktibbeha, and Noxubee Counties, the House approved Supplemental Report E of the Board, authorizing organization and chartering of the Prairie Medical Society as the 17th component body of the association. The Board gave active assistance to the society in its organization, and the charter was presented by the President, assisted by other general officers and Trustees, on December

15, 1965, to become effective January 1, 1966. The Board commends this new society whose delegates are seated for the first time at this annual session.

(d) *Immunization Against Measles*. The Board referred Resolution No. 4, 97th Annual Session, to the Council on Medical Service for study and recommendation. The resolution urged "component medical societies to extend medically sponsored nongovernmental immunization service campaigns against measles." The council recommended that the intent of the resolution, in the light of special considerations inherent in this proposal, could best be carried out through publicizing the proposal in the *Newsletter* and the *JOURNAL* and by personal communication from the President to each component medical society. The Board concurred, and the recommendations of the council have been carried out, thereby fulfilling the intent of Resolution No. 4.

(e) *Radiology and Pathology*. At the 1965 annual session, Resolutions Nos. 7 and 9 relating to the practice of radiology and pathology were adopted. These resolutions affirmed that the practice of radiology and pathology were the practice of medicine in all relevant senses and that the association rejects any definition that would portray the practice of any medical discipline as a hospital service. In the light of various pronouncements in ethics, pertinent provisions of Public Law 89-97, and actions of the Mississippi Radiological Society, the Board approved, at the request and petition of that society, a policy position under which a radiologist would submit a statement for his professional services directly to the patient. Under such a billing procedure, no hospital would act as billing, collecting, or pooling agent for a radiologist. It is the Board's understanding that a similar position is under consideration by the Mississippi Association of Pathologists.

(f) *Lay Laboratories*. Resolution No. 8, 97th Annual Session, encouraged physicians to recognize and appreciate the latent hazard in employing lay laboratory service and suggested that further studies be made with a view toward control of lay laboratories. The Board requested a definition of "lay laboratory" from the Mississippi Association of Pathologists. The MAP stated that a lay laboratory is one which is not supervised by a physician, pointing out that all laboratories need not be supervised by a pathologist but should, in fact, be supervised by a physician. The statement also said that most lay laboratories do not observe the Principles of Medical Ethics with respect to advertising and that a physician may make himself legally liable in utilizing such services. The Board

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has offered its services in the prompt review and analysis of any legislative proposal in this connection.

(g) *OEO Head Start*. During late 1965, the Board was informed by the Atlanta Region of the Office of Economic Opportunity that the Head Start program for preschool children whose families fall within the definition of those eligible for assistance under the anti-poverty program will be continued as a permanent federally-supported project. On December 6, officers and representatives of the Board attended a meeting with the Regional Director and Medical Director of the OEO Atlanta Office. An agreement was reached that the medical and health aspects of Head Start should be under the State Board of Health and various county health departments. A commitment was made by the Medical Director to furnish advance notice of the funding of Head Start programs in Mississippi to the association and SBH. The Board believes that this arrangement will assist physicians who desire to offer their services in these programs.

*Committees of the Board of Trustees*. The Board is assisted in its work by four constitutional and six *ad hoc* committees. For reporting purposes, four of the eight councils are responsible to the Board.

(a) *Grievance Committee*. During the past association year, this committee processed three written complaints, all of which were heard at component society level. The committee was not called upon to function in an appellate capacity. Over the course of the past four years, a diminution in written complaints of about 50 per cent has been noted.

(b) *Committee on Publications*. The committee reports that the JOURNAL has completed its sixth year of publication with a notable increase in content quality and advertising. During 1965, the JOURNAL won its seventh and eighth awards for excellence. Two special issues were published in 1965, one on narcotic addiction and one on parapsychology. Volume VI contains the work of 93 authors. The Board has expressed appreciation and commendation to the committee, editors, and staff for their work in the largest single continuing project of the association, our JOURNAL MSMA.

(c) *State Medicare Review Board*. The Dependents' Medical Care Program decreased about 10 per cent during 1965 from the previous year with the continued closing of domestic military installations but now is reflecting an increase with addi-

tional manpower demands of the Viet Nam war. There was substantial improvement in claims payability with the rate of formal reviews decreasing. Physician participation remains stable at 56 per cent. The Board of Trustees commends the State Medicare Review Board and their upgrading of the program during the past year.

(d) *Medical Aspects of Driver Limitation*. The medical examination program for certain driver license applicants or licensees has been implemented, and about 40 examinations by private physicians have been conducted on a pilot basis. The committee has adopted some procedural changes intended to adduce more information on the medical findings without additional burden upon the examining physician. The committee is studying tests for intoxication while driving. The Board associates itself with the committee in expressing appreciation to the Mississippi Department of Public Safety for careful and serious coordination of the program with the association and for making the committee's advice a factor in all decisions.

(e) *Other Committee Activity*. The three vice presidents comprise the selection committee for the MSMA-Robins Award which will be announced at the adjourned meeting of this House of Delegates. The MSMA-Mississippi Hospital Liaison Committee has coordinated a variety of subjects of mutual interest between the two associations including the indigent care issue. The Committee on Legislative Liaison coordinates the legislative program at county level, the Committee on Medicine and Religion continues to suggest activities in its sphere of interest at local society level, and the Advisory Committee to the Medical Auxiliary has been working on a new program of activity with and at the request of Auxiliary leaders. The *ad hoc* Committee to Study Blue Shield Plans has worked directly with the Board, and a separate report in this connection is being made.

*Legislative Activities*. The Council on Legislation has submitted six reports to the Board since the 97th Annual Session and has been extensively engaged in our program during the 1966 Regular Session of the Legislature which continues. More than 90 bills of health and medical interest have been introduced, and the most notable enactment of association sponsorship has been the Battered Child Law, a proposal first advanced in 1964. Over vigorous association objections, the Legislature amended a proposal of the Mississippi Dental Association and added an optometrist to the membership of the State Board of Health.

The Emergency Medical Care Unit has been open on each legislative day since the convening



of the session on January 4, having served the membership of the legislature 67 days through the 17th week. The weekly bulletin, "Legislative Report," is published from the headquarters office for state and local medical society leaders to supply informational coverage on all health and medical legislation.

Because of incomplete action on most medical legislation, a full informational reporting will be made through the JOURNAL to the membership after adjournment of the present session.

**Group Insurance.** The group insurance programs of the association have been closely monitored by the Board. A new program with the Continental Casualty Co. offers complementary benefits to those in Title XVIII, Public Law 89-97, for members of the association over age 65. Other programs remain unchanged with the exception of a premium or dues increase in the Blue Cross group hospital program for members and their immediate families.

**Meetings and Officers of the Board.** During eight meetings of the Board of Trustees over nine meeting days during the year, there were only four absences, resulting in a mean attendance of 95 per cent. There were no absences among the general officers who sit with the Board. Officers of the Board for the 1965-66 association year have been Drs. John B. Howell, Jr., chairman; Lamar Arrington, vice chairman; and C. D. Taylor, Jr., secretary.

#### REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee considered the annual report of our Board of Trustees. This report primarily recounts actions on those matters which were referred to the Board during the 97th Annual Session in 1965.

With reference to the portion of the report concerning the terms and conditions of medical practice, your reference committee recommends that the State Board of Health *rigorously enforce the medical practice act* to the end that all irregular practitioners who may be in violation thereof, be prosecuted as provided by law.

We commend the Board of Trustees for its diligent and conscientious management of our association's affairs and for having conducted eight meetings over nine meeting days since the 97th Annual Session in 1965.

The report of the reference committee was adopted.

#### SUPPLEMENTAL REPORT "A" OF THE BOARD OF TRUSTEES

*Dr. John B. Howell, Jr.: Enactment.* On July

30, 1965, H. R. 6675 was signed into Public Law 89-97 as the Social Security Amendments of 1965. Throughout a series of meetings, the Board of Trustees carefully analyzed and studied the provisions of the several titles of the law, especially Title XVIII which provides for the hospital and medical service programs of Medicare. Similar studies were undertaken by the Council on Medical Service from the standpoint of benefits accruing to those defined as eligible under the law.

**97th Annual Session.** At the 1965 annual session, the Council on Medical Service in its Supplemental Report A recommended that the association endeavor to qualify as fiscal intermediary for Part 1-B, the supplementary medical service aspect of the program. The reference committee approved the recommendation and asked for its adoption, but the report was tabled in the House of Delegates.

In studying and analyzing the law, both the Board and the council took the position that

(1) Medicare will dramatically affect the practice of medicine in the United States and in Mississippi, and that

(2) Medicare will be an extensive program in Mississippi with or without the cooperation, interest, and participation of the state medical association, and that

(3) The association has both a duty and an obligation to its members who will participate in Medicare and to its members who will not participate to employ its full resources and capacities to see that the legal and ethical intention of each group are represented to the best of the association's abilities, and that

(4) In order to have a voice in the operation of the program, it is imperative that the association assume a position of leadership in all aspects of its implementation and operation.

Since the proposal at the 97th Annual Session had not been acted upon, the Board, respecting the prerogatives of the House of Delegates, made the decision to call a special session which was convened at Jackson on December 16, 1965. At that time, the foregoing four point position was approved. Additionally, there was a necessary clarification of policy in this entire connection as to utilization review and the full freedom of physicians to care for patients under the program or to elect not to care for them under the program.

**Carrier for Part 1-B.** At least five state medical associations applied for appointment as Part 1-B carriers for their respective professional jurisdictions. Legal counsel for the Department of Health, Education, and Welfare ruled that none was eligible unless it included organically and inherently

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a voluntary prepayment plan. Thus, Wisconsin was alone successful. In Mississippi, the Travelers Insurance Co., a Hartford, Conn. based firm, was appointed Part 1-B carrier.

*Special Session.* The Board expresses appreciation to the House of Delegates for its generous response to the call for the special session in December and for the considered debate and wise counsel given. We are grateful that the certifying agency for hospitals and nursing homes was designated in accordance with the recommendations of the association with the naming of the State Board of Health. The policy clarification was invaluable in guiding the Board, and the special session's decisions have been a sound basis for guidance within the desires of this House of Delegates.

### REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

The supplemental report of the Board of Trustees on Public Law 89-97 has been submitted to the House of Delegates as a matter of information. This report summarizes actions taken during the special session of the House of Delegates which was conducted at Jackson on December 16, 1965.

Your reference committee approves this report and recommends its adoption.

The report of the reference committee was adopted.

### SUPPLEMENTAL REPORT "B" OF THE BOARD OF TRUSTEES

*Dr. John B. Howell, Jr.: Background.* At the 97th Annual Session, Resolution No. 11, subject: Blue Cross-Blue Shield Division, was introduced on behalf of the Coast Countries Medical Society. The resolving clause read as follows:

RESOLVED, That the Mississippi State Medical Association through its Board of Trustees or other duly appointed authority within the next year explore the feasibility of setting up a separate Blue Shield Plan administered by the Mississippi State Medical Association.

The House of Delegates adopted the following report of the reference committee which considered Resolution No. 11:

Your reference committee recommends that the resolution be referred to the Board of Trustees for study and the seeking of further information. Your committee notes that there is distress and dissatisfaction in connection

with the furnishing of information on Blue Shield. We also recommend that the Board consider the possibility of employing actuarial consultation in this connection.

*Study on Blue Shield.* During the series of meetings of the Board of Trustees in 1965, the question posed in Resolution No. 11 was before the Board in lengthy and detailed discussion. At the August 18-19 meeting, the decision was made to authorize a comprehensive research and study project, since there were no currently available data on the 65 independent and 9 joint plans. The National Association of Blue Shield Plans responded to the formal request of the association with professional staff assistance with reference to data gathering. Other authoritative sources, including the plans themselves, were surveyed and consulted. Additionally, previous studies regarded as authoritative were reviewed.

This research and study project was conducted over a five month period under the guidance of an *ad hoc* Committee to Study Blue Shield. The final published report, "Blue Shield in the United States," was presented to the Board of Trustees at its December 9 meeting. It is the most comprehensive research project ever undertaken by the association, and the Board believes that it provides full and useful information on the background, development, concept, operation, and benefits of Blue Shield through overall analysis and individual consideration of the 74 domestic voluntary prepayment plans in this field.

A copy of the study has been furnished to each member of the House of Delegates prior to this annual session. The Board of Trustees hopes and believes that it fulfills the requirement of the House of Delegates "for the seeking of further information" and the implied type and quality of information suggested in the consideration of actuarial consultation.

*Consultations with the Mississippi Plan.* In undertaking the study, the Board directed that the prospectus be coordinated with the 12 physician-directors of the Mississippi Hospital and Medical Service. This was done prior to the study, and the report was promptly furnished to each of the physician-directors and to executives of the Mississippi plan. At all times, the Board of Trustees has endeavored to coordinate its deliberations with the plan through these physician-directors, and three, Drs. Lamar Arrington, G. Swink Hicks, and Joseph B. Rogers, are members of the Board.

The Board of Trustees expresses its appreciation to the 12 physician-directors who, in addition to the three Trustees, are Drs. S. Lamar Bailey, R. B. Caldwell, William N. Crowson, M. Q. Ew-



ing, George H. Martin, Andrew K. Martinolich, T. E. Ross, Walter H. Simmons, and James G. Thompson.

On February 15, 1966, J. C. Woosley, Ph.D., assumed the presidency of the Mississippi Hospital and Medical Service. On April 27, in a letter to all Mississippi physicians, Dr. Woosley informed the profession of an internal reorganization of the plan which "should make for better administration and coordination of the Blue Shield activities with the medical profession and the subscriber-patients we both seek to serve."

On April 28, the Executive Committee, under instructions of the Board of Trustees, met with Dr. Woosley. There were frank and candid discussions of this entire issue. Those in attendance, including some other members of the Board and all five principal general officers appreciated the opportunity to conduct these discussions with Dr. Woosley and of receiving his equally candid response.

*Recommendation of the Board.* The Board of Trustees feels that the indulgence of the House of Delegates should be given the matter posed in Resolution No. 11 and that with the cooperation of Dr. Woosley and his colleagues, which we have been assured, and with the continued cooperation of the 12 physician-directors, a more satisfactory plan than has heretofore existed can be developed. We ask this indulgence for a period of one year, believing that Dr. Woosley should be given the opportunity to effect internal changes as he sees fit toward realizing the goals mentioned.

The Board of Trustees, therefore recommends that no further action be taken on Resolution No. 11.

To assist and encourage development of a more satisfactory Blue Shield plan in Mississippi, the Board of Trustees recommends that the Mississippi Hospital and Medical Service diligently pursue and seek the following:

(1) An equitable distribution of benefit monies which the plan has with the clear understanding that physicians seek to receive only Blue Shield funds for services rendered.

(2) An increase in Blue Shield benefits to a more realistic level.

(3) Use of a Relative Value Index furnished by the Mississippi State Medical Association and developed by the association.

(4) Continuation of Blue Shield benefits on an indemnity basis only.

(5) Re-evaluation of the manner in which plan benefits are presented to the public by the plan in its sales, advertising, and communications programs.

## RESOLUTION NO. 6, REORGANIZATION OF BLUE SHIELD

*Dr. C. D. Taylor, Jr.:* WHEREAS, The Coast Counties Medical Society has been interested in the possible separation of the Blue Cross-Blue Shield plans of Mississippi to attempt to get a better distribution of the fees in the medical association insurance plan, and

WHEREAS, There has been some attempt by the Mississippi Blue Cross through its physician-directors to separate the accounting as previously requested, and

WHEREAS, This separation of accounting is as yet not available, and

WHEREAS, The Board of Trustees of the association has conducted a comprehensive study to explore the feasibility of setting up a separate medical plan supervised by the Mississippi State Medical Association, now, therefore, be it

*Resolved,* That the Mississippi State Medical Association prepare to operate the Blue Shield plan of medical and surgical coverage under the auspices of the Mississippi State Medical Association, and be it further

*Resolved,* That a separate board be set up to operate Blue Shield.

## REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Supplemental Report B of the Board of Trustees concerns Resolution No. 11 which was introduced at the 97th Annual Session recommending that "The Mississippi State Medical Association through its Board of Trustees or duly appointed authority within the next year explore the feasibility of setting up a separate Blue Shield plan administered by the Mississippi State Medical Association." Your reference committee simultaneously considered Resolution No. 6 introduced in behalf of the Coast Counties Medical Society, subject: Reorganization of Blue Shield. This resolution proposes that "the Mississippi State Medical Association prepare to operate the Blue Shield plan of medical and surgical coverage under the auspices of the Mississippi State Medical Association, and that a separate board be set up to operate Blue Shield."

Acting in response to instructions of this House of Delegates, our Board of Trustees conducted exhaustive and extensive studies on Blue Shield and the study report, "Blue Shield in the United States," was published and submitted to the Board during the year. Prior to this annual session, the report was sent to all members of the House of Delegates by our Speaker. This committee con-

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curs with the Board in that the report is "the most comprehensive research project ever undertaken by the association," and we believe that it furnishes useful information on the background, development, concept, operation, and benefits of Blue Shield in the 74 domestic plans in the United States.

Your reference committee, in approving this report, recommends that the Board of Trustees be requested to use the methods that are necessary to achieve a more equitable distribution of benefit monies under the plan and that the Board continue to work with the Mississippi Hospital and Medical Service for the objectives outlined in the report.

The reference committee, therefore, recommends that no further action be taken on Resolution No. 11, 97th Annual Session, and we further recommend that Resolution No. 6 introduced at the present annual session be not adopted.

In discussion of the report of the reference committee, Dr. R. J. Moorhead of Yazoo City suggested that adoption of the report might impart unlimited authority to the Board of Trustees in dealing with Blue Cross-Blue Shield. Dr. Lamar Arrington of Meridian, vice chairman of the Board, responded that the Board of Trustees had always reported its actions fully to the House of Delegates. Dr. Byron A. Mayo of Drew spoke in support of the report of the reference committee.

Dr. S. H. McDonnical, Jr., of Jackson moved that the period of time during which the indulgence of the House of Delegates is granted be limited to one year, and the motion was seconded by Dr. John A. Murphee of Amory. The chairman of the reference committee, Dr. Lawrence W. Long of Jackson pointed out that a period of one year was specified in Supplemental Report B, and the motion and second were withdrawn.

Dr. George E. Twente of Jackson spoke in support of the one year provision, and Dr. S. S. Kety of Picayune stated that he had introduced a resolution similar to Resolution No. 11, 97th Annual Session, seven years ago. He stated that hospitals have received an increasing amount of money from the plan but that physicians are not receiving more than when he introduced his resolution. Dr. Kety stated that hospital representatives on the Blue plan's board of directors faithfully attend meetings.

Dr. Walter H. Simmons responded that physician-directors of the plan also attend meeting of the board faithfully, and Dr. S. Lamar Bailey of Kosciusko concurred in Dr. Simmons' remarks.

The report of the reference committee was adopted.

### SUPPLEMENTAL REPORT "C" OF THE BOARD OF TRUSTEES

*Dr. John B. Howell, Jr.: Background.* In 1963 and 1964, the Board noted with concern, and so reported to the House of Delegates, that the association experienced losses in operations. In 1963, a loss of \$2,093 was experienced, and in 1964, there was a loss of \$1,228. Despite the fact that these losses were never as much as 2 per cent of the operating budget and despite the fact that they also were less than amounts written off in depreciation of your headquarters building, the Board redoubled its management effort. In 1965, again in the face of increased demands upon your association's resources with vastly expanded programs and national and state legislation and generally rising prices, the association enjoyed a very slight excess of income over expenses, a net of \$287.

With the action of the AMA House of Delegates at the Philadelphia Clinical Convention in approving an AMA dues increase from \$45 to \$70 per year, the Board directed that detailed studies on dues structures be made. These studies have been submitted to the Board, and the Council on Budget and Finance has been closely consulted as to needs and demands for necessary operational expenses.

*MSMA Finances.* Dues of our state medical association have not been increased in 12 years, the increase then being from \$35 to \$50 total dues per year. This amount was geared to the 1956-58 economy and price levels. Since that time, many new service demands have fallen, and properly so, upon the association. There has been a general rise in prices (and personal income) of about 20 per cent in the intervening decade.

It should be carefully noted and appreciated that since we achieved a leveling of permanent programs in 1960 with the establishment of our JOURNAL, the annual budget has actually had to be decreased. Yet, we have been forced to purchase more goods and services in a market of rising prices. Only through good management have we been able to sustain this effort in the mid-60's on income geared to the mid-50's.

In the same period, other state medical associations have been confronted with this same problem. Since 1956, a total of 44 state medical associations have increased their dues at least once. In 1956, 31 state associations had dues under \$50 per year; today, only 11 states are in this bracket. In 1956, only seven state medical



associations had dues of more than \$50 per year. Today, 33 states have dues of more than \$50 per year. Seventeen states have dues ranging from \$80 to \$160 per year. Three state medical associations with memberships almost identical to ours (within 3 per cent of MSMA membership) all have much higher dues: Arizona, \$105 per year; Arkansas, \$75 per year; and Nebraska, \$100 per year. This problem has been universal among state medical associations. It now becomes much more critical for those 13 state medical associations in which AMA dues are mandatory in view of the pending increase of the latter to \$70 per year.

*Association Resources and Needs.* Our fortunes, as is true with any of the smaller associations, have been closely tied to nondues revenues. These, for the greater part, are JOURNAL income and administrative reimbursement from the Dependents' Medical Care Program. Dues make up less than half of our operating funds.

The Board emphasizes, that under current operational budgeting and under every budget since 1960, the association has expended each year more than \$100 for services and programs for every member who pays dues of \$50.

We have been fortunate in our building venture, and the appreciation in value of the property is one of our largest real assets. Yet, we note that our building is 10 years old this May, and we must look forward to the day when refurbishing and replacements are needed to protect our investment and provide for our full use and profit of the facility. Since 1961, equipment acquisitions have been minimal, and we own no office equipment of less than five years in age and usage. Much of our equipment is 10 years old and now needs replacing.

Our executive staff, now one less than a year ago but with increased duties, is taxed to capacity. One of the factors in avoiding a deficit in 1965 was the taking of increased duties by staff members. Numerically, the staff is now exactly the same as it was in 1957. At least two new staff members are urgently needed.

Nondues income has been sought conscientiously. JOURNAL advertising rates are at the highest point practical to assure the new and higher level of sales we are enjoying. A small increase in administrative reimbursement for the ODMC program was negotiated for 1966-67. Annual session exhibit space rental was increased with the present meeting.

*Recommendation.* The Board, in the light of the needs and facts, recommends that the annual dues of the association be increased \$10 per year to a total of \$60 effective January 1, 1967. This modest increase will assist in meeting mounting

costs and in assuring present levels of service and association activity. No amendment to the By-Laws is necessary since Section 4, Chapter I, provides that "A per capita assessment determined by the House of Delegates shall constitute the dues of the association."

#### RESOLUTION NO. 3, DUES OF THE ASSOCIATION

*Dr. John F. Lucas:* WHEREAS, The activities and program of service of the Mississippi State Medical Association have been expanded by the membership through various official actions during the past decade, and

WHEREAS, It is recognized that costs generally have risen during the same period, thereby exerting additional demands upon the resources of the association in the face of these rising costs, and

WHEREAS, Dues of the association have not been increased in 12 years, thereby resulting in a lowering of the association's purchasing power in all respects, and

WHEREAS, It is desirable to be able to maintain all necessary and required services by the association in the interest of members both as individual practitioners and as a professional group, now, therefore, be it

*Resolved,* That the Delta Medical Society does recommend an increase in the dues of the association, suggesting an increase of \$10 annually, to assist in meeting ever rising costs so that the present full range of service activities and programs may be maintained and so that the membership may be in position to require of the association such services as are necessary and desirable, and that such an increase be made effective with the 1967 calendar year.

#### REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Supplemental Report of the Board of Trustees C outlines the needs of the association with reference to our budget and the necessity of increasing our dues \$10 per year for a total annual dues of \$60.

Your reference committee was impressed that not a single witness appearing before us opposed this recommendation of the Board. We believe that the Board has conscientiously sought nondues revenues, and we concur in the recommendations contained in Supplemental Report C and Resolution No. 3 that our dues be increased \$10 per year effective January 1, 1967. Your reference committee notes that no amendment to the By-Laws is required to accomplish this objective.

The report of the reference committee was adopted.

## HOUSE OF DELEGATES / Continued

### REPORT OF THE SECRETARY-TREASURER

*Dr. James L. Royals: Duties and Responsibilities.* As an elected general officer of your association, your Secretary-Treasurer is charged with such duties as ordinarily devolve upon the secretary of a corporation by law, custom, and usage. Additionally, he is the constitutional designee as chairman of the Council on Scientific Assembly.

*Membership.* For the third consecutive year, the highest membership in the history of the association was recorded as of December 31, 1965. On that date, there were 1,414 members in good standing as compared to 1,392 a year previously. The 1965 total includes:

- 1,258 paid members
- 86 Emeritus members
- 70 members exempt from dues other than Emeritus

On May 1, 1966, there were 1,285 members in good standing as compared with 1,331 a year ago. This demonstrates that the 1966 membership program is not progressing rapidly. Among the May 1, 1966, totals, there are:

- 1,146 paid members
- 81 Emeritus members
- 58 members exempt from dues other than Emeritus

Among those exempt or excused from dues are 36 in AMA-approved residency programs, 5 scientific members, 9 exempt by reason of extended illness, 1 for hardship, and 7 associate members. For the first time in years, there are no members currently excused from dues by reason of military service. To maintain our membership records in consonance with those of AMA, deceased members are removed from the rolls for statistical purposes after the close of the year being reported. As has been the practice, deaths are reported as soon as possible in the JOURNAL.

The association commends the following component medical societies for having secured 100 per cent of their renewable 1965 membership for the current year as of May 1.

Amite-Wilkinson County Medical Society  
 Claiborne County Medical Society  
 Delta Medical Society  
 DeSoto County Medical Society  
 Pearl River County Medical Society  
 West Mississippi Medical Society

The newly chartered Prairie Medical Society is 100 per cent in membership for 1966, and we commend this society for its splendid beginning.

*Fiscal Reporting.* In accordance with our usual

practice, your Secretary-Treasurer submits a statement of your association's fiscal condition as of April 30, 1966, as an attachment to this report. The Council on Budget and Finance has reviewed fiscal records, considered a budget for 1966-67, and has reported to the Board of Trustees in this connection. An overall budget of \$129,643.63 has been recommended, and a copy of this budget is attached to the report. This amount is exclusive of monies which the association will expend in payment of professional fees under the Dependents' Medical Care Program and which will be reimbursed to the association by the Department of Defense. For this purpose, the association holds a capitalization of \$55,000.00 interest free.

*Constitutional Duties.* Your Secretary-Treasurer is an *ex officio* member of all councils and committees of your association, and he sits with the Board of Trustees as a general officer. Activities in connection with the responsibility of serving as chairman of the Council on Scientific Assembly are reported separately.

### MISSISSIPPI STATE MEDICAL ASSOCIATION STATEMENT OF FINANCIAL CONDITION AS OF APRIL 30, 1966

#### ASSETS

##### Current Assets

General Fund		
Cash on deposit	\$ 73,679.56	
Due from Department of Defense, ODMC administrative costs	1,617.00	
Due from advertisers, JMSMA	6,190.21	
Other receivables	832.70	
Prepaid expenses	3,077.73	\$ 85,397.20

##### ODMC Program

Cash on deposit, Professional Account	17,518.82	
Due from Department of Defense, Professional Account	37,481.18	55,000.00

##### Fixed Assets

Land	13,605.30	
Building and Equipment, less depreciation	70,576.59	84,181.89
Total Book Assets		\$224,579.09

#### LIABILITIES AND NET WORTH

##### Current Liabilities

Amortization, building, current year	\$ 2,727.68	\$ 2,727.68
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##### Long Term Liabilities

Building	29,216.31	
ODMC program capitalization	55,000.00	84,216.31

##### Net Worth

Unappropriated net worth	137,635.10	137,635.10
Total liabilities and net worth		\$224,579.09



REPORT OF THE REFERENCE COMMITTEE  
ON REPORTS OF OFFICERS AND  
BOARD OF TRUSTEES

Your reference committee considered the report of our constitutional secretary except for that portion relating to fiscal reporting. We commend Dr. Royals for his diligence and service to our association and we hope that the several component medical societies will devote themselves to the early and full completion of our present membership effort.

Your reference committee recommends that the three vice presidents of the association who will be elected at the present annual session devote themselves energetically and vigorously to the work of membership and to the end of having every eligible physician invited into the circle of our professional bonds and fraternity. We also recommend that each vice president be informed by the incoming president of his duties.

We thank the Secretary-Treasurer for his splendid service and recommend adoption of the report.

The report of the reference committee was adopted.

REPORT OF THE COUNCIL ON BUDGET  
AND FINANCE

*Report of the Secretary-Treasurer and Association Operations.* Your council has considered that portion of the annual report of the Secretary-Treasurer with reference to fiscal activities of our association. The findings are to the satisfaction of your council. We have determined that all accounts, receipts, and disbursements are regular, authorized, and in good order.

*Association Budget.* We have considered the 1966-67 budget for the operation of your association and we have conferred with the Board of Trustees who concur in our recommendation. Each item has been carefully evaluated as to necessity and adequacy. We recommend a total budget of \$129,643.63 which includes the following sums for purposes stated: (1) For general operation of all activities and departments of the association, including production of the JOURNAL, \$92,325.39; (2) for building amortization, utilities, maintenance, taxes, and associated expenditures, \$11,658.30; (3) for other activities as outlined in the budget which was attached to the report of the Secretary-Treasurer, \$25,659.94. We recommend the adoption of this amount as being a realistic minimum for continued effective operation of your association.

*Insurance Safeguards.* We have examined a survey of insurance owned by the association on

its physical properties and we find it adequate. Suitable safeguards for disbursement procedures, fidelity bonds, and proper safekeeping for records have been provided.

The report of the council was adopted.

REPORT OF THE EXECUTIVE SECRETARY

*Mr. Rowland B. Kennedy: Duties and Responsibilities.* Your Executive Secretary is responsible for maintaining the headquarters office, for conducting the administrative affairs of your association, and for various fiduciary duties as required by Article VII of the Constitution and Section 7, Chapter VII, of the By-Laws. Because your Executive Secretary reports in detail to the officers, Board of Trustees, and various supervisory bodies of your association, this report is purposely brief in scope and detail.

*Executive Staff.* Your executive staff is organized into four service departments under the office of the Executive Secretary. These departments are membership, fiscal and accounting, JOURNAL, and medical care plan services. Since the 97th Annual Session, there has been a numerical reduction of one staff member, despite the fact that work volume has increased. The Board of Trustees is closely conversant with the work volume, and there is close coordination with the Board and general officers in this and other management aspects of your headquarters office.

We have provided supportive and staff services to the officers, Board, the councils, and committees, and we have exerted conscientious effort to maintain a level of service consistent with the growing programs of your association and the increased activities of your official bodies.

*Expression of the Staff.* As amply attested to in many reports before this House of Delegates, the 1965-66 association year has been demanding and difficult. In behalf of your executive staff, deep appreciation is expressed for the support and confidence given us in our endeavors which were totally dedicated in your behalf.

REPORT OF THE REFERENCE COMMITTEE  
ON REPORTS OF OFFICERS AND  
BOARD OF TRUSTEES

Your reference committee considered the report of the Executive Secretary. We express our appreciation to the Executive Secretary and the executive staff for devoted service to our association during the past association year, and we recommend the adoption of the Executive Secretary's report.

The report of the reference committee was adopted.

## HOUSE OF DELEGATES / Continued

### REPORTS OF THE DELEGATES TO AMA

*Dr. J. P. Culpepper, Jr.: Revised Format of Reports.* Your Delegates to the American Medical Association attended and participated in four meetings of the House of Delegates in 1965. In addition to the annual and clinical conventions, there were two special conventions, the latter being only the fifth and sixth in the 118 years of AMA history. Because of the excellent reporting to all members of scientific and related proceedings which are now made through the *AMA News*, your Delegates will limit their reports to a pertinent review of policy decisions.

*First Special Convention.* The AMA House met at Chicago February 6-7, 1965, on call of the Board of Trustees. The principal business was the then-pending King-Anderson Bill and the AMA-sponsored and supported "Eldercare" Bill. The House reaffirmed opposition to the King-Anderson measure and all similar bills and took four major actions in this area of concern. Support was voted for the "Eldercare" measure, the Herlong-Curtis Bill, under which it was proposed to offer federal grants to the states on a matching basis for voluntary prepayment and health insurance coverage of all citizens over age 65 who were found to be in need. The cost of such coverage would have been borne by government entirely where the income limits of the individual were below state-set levels. The measure failed in the Congress.

First, the House reaffirmed the action of the Board of Trustees in funding a public education program in behalf of the "Eldercare" proposal. The Board reported a continuation of the program with financing from AMA reserves with assurances that no dues increase would be necessary. This was easily the most controversial issue before the special convention.

Second, the House voted to study the "desirability and feasibility of extending the principle of federal and state aid under the Kerr-Mills principle to persons below the age of 65 who need help."

Third, a series of nine standards for health care programs was adopted with emphasis upon helping those who need help, use of voluntary prepayment and health insurance mechanisms, local control and administration, state and federal funding, and avoidance of the involvement of Social Security funding.

Fourth, the House took the position that payment for the professional services of pathologists, radiologists, physiatrists, and anesthesiologists

should be excluded from any health care program which excludes other physicians' services.

*New York Annual Convention.* The 114th Annual Convention of AMA was conducted at New York June 20-24, 1965. Principal business included federal health care legislation, the Heart Disease, Cancer, and Stroke program, a reorganization of the House of Delegates, and organization of the scientific assembly as relates to the sections.

The issue of nonparticipation in the then-pending Medicare law was highly controversial, arising out of portions of the president's address and nine resolutions. The House voted to recommend that "the members of the American Medical Association be reminded that it is each individual physician's obligation to decide for himself whether the conditions of a case for which he is about to accept responsibility permit him to provide his own highest quality of medical care." The House further stated that "when the fate of the pending Medicare legislation is determined, this House will review, in special session if necessary, the effect of the law and take whatever action is deemed necessary."

Delegates also voted to point out that the actions in no way altered Section 6 of the Principles of Medical Ethics and to reaffirm the principles of the Bauer amendment of 1961. An offer to the President of the United States was made to meet with him and to discuss the views of the medical profession on the pending legislation.

The House voiced opposition to the then-pending Heart Disease, Cancer, and Stroke program by favoring extension of existing patterns of research and medical practice rather than replacement by a complex of medical control centers and satellites.

Final action on the Gundersen Report for reorganizing the House of Delegates was postponed until the Clinical Convention, and new procedural guides were adopted for the evaluation and organization of new scientific sections. Four resolutions seeking approval of an American Board of Family Practice were not acted upon because their adoption, the reference committee stated, would circumvent the procedures expressed in the Essentials for Approval of Examining Boards in Medical Specialties. The resolutions were referred to the Council on Medical Education where the proposal has been under study by a special *ad hoc* committee.

*Honors to Mississippi Physicians.* Two Mississippi physicians earned high honors at the New York Annual Convention. Dr. William E. Lotterhos of Jackson was elected chairman of the AMA Section on General Practice. Dr. James D. Hardy of Jackson, professor and chairman, De-



partment of Surgery, University of Mississippi School of Medicine, and his associates were awarded the Hektoen Silver Medal for their exhibit on transplantation of tissues. The Hektoen award series is the highest scientific award in this connection.

*Dr. George E. Twente: Second Special Convention.* The third meeting of the AMA House of Delegates was convened at Chicago October 2-3, 1965, pursuant to petition of the requisite number of delegates from one-third or more of the state medical associations, as provided in the Constitution and By-Laws. While there were varied presentations placed before the House in reports and resolutions, the only major item of business related to the Medicare program as enacted in Public Law 89-97. A single reference committee heard discussion by 125 witnesses who addressed themselves to 20 subjects during seven and one-half hours of testimony. The report dealt with specific policies and principles rather than separate presentations.

The issue of nonparticipation was again uppermost during debate. The general counsel of the American Medical Association, in an address to the House, cautioned of possible anti-trust liability resulting from overt acts which the courts might construe as efforts to thwart the law. In this connection, the House accepted this statement from the reference committee:

Legal counsel for the American Medical Association has stated that an individual physician acting independently and not in concert with others can lawfully refuse to accept any person as a patient who is a beneficiary under the (Medicare) program, or he may elect to treat such persons.

An opinion by the Judicial Council was in agreement with the statement, although the opinion was qualified by four ethical considerations: (1) Response to a call for service in an emergency; (2) not neglecting a patient once care has been undertaken; (3) advising patients in advance as to individual desires on whether a physician has elected to participate or not to participate in the Medicare program; and (4) not to refuse to render medical service to any person if as a result such person will be unable to get necessary medical care. In accepting the opinion, the House said that it should be read together with the Bauer amendment of 1961 and the nine principles for health care programs adopted at the February special convention.

The House adopted a three point policy statement with reference to the development of regulations under the Medicare law:

(1) That AMA representatives continue to meet with representatives of agencies and depart-

ment of the federal government, to participate in advisory capacities, and to contribute advice and suggestions to help achieve medicine's objectives in behalf of the public and profession.

(2) That AMA urge every physician, regardless of the extent of his involvement, to contribute whatever advice and assistance he can with reference to the regulations and/or changes in the law, also in the best interests of the public and profession.

(3) That the House of Delegates express confidence in the Board of Trustees, the advisory committee, and the panel of consultants for their continuing efforts to secure regulations which are in the best interests of good patient care.

As to the selection of intermediaries to serve patients and those physicians who elect to render care under the supplementary insurance, Part 1-B, the House stated that while Blue Shield has, in many areas, demonstrated its ability to provide a competent insurance program, expressions of preference as to the selection of intermediaries should be left to the state medical associations or appropriate local medical societies. The House stated categorically that "hospital utilization review committees shall be composed of practicing physicians."

The House took the position that each physician should be informed fully as to the merits and limitations of billing Medicare patients directly or accepting assignment to enable payment by an intermediary. Further support and reaffirmation of the position on hospital-based specialists was given.

*Philadelphia Clinical Convention.* The regular Clinical Convention met at Philadelphia November 28-December 1, 1965. Principal issues were "prevailing fees" as proposed by Blue Shield, abortion and sterilization, billing for medical services, an increase in AMA dues, reorganization of the House of Delegates, and federal health care laws.

In giving qualified approval to the "prevailing fee" concept, the House stated that the "program of the National Association of Blue Shield Plans (should) be noted as one of the methods of compensation in those regions where the prevailing fees program is approved by the local or state medical society." Recommendation for enactment of legislation for legalization of abortion and sterilization under certain conditions was referred to the Board of Trustees for further study. As to the matter of abortion, the House expressed the view that it should be resolved by each state through local legislative action. Support was given the proposal that physicians should provide information and guidance on medical implications of such pro-

## HOUSE OF DELEGATES / Continued

cedures as well as child-spacing information to patients who request and require it.

A series of eight statements on billing for medical services was adopted in which emphasis was given to respect for the physician-patient relationship, avoidance of third party interference, patient responsibility of dealing with third parties, reasonableness of fees, proper utilization of insurance and prepayment plans, and ability of the patient to pay.

The Board of Trustees recommended that the dues of AMA be increased from the present \$45 to \$70 per year effective January 1, 1967. The request was based upon deficit spending of \$1 million in 1965 and the fact that AMA's budgetary needs have risen from \$16 million per year to \$27 million per year. The proposal was adopted by a vote of 148 to 72. Your Delegates opposed the increase proposal on the basis that there was no opportunity to discuss the matter with our association to get an expression of its wishes and the fact that such an increase was especially important to the 13 states in which AMA dues payment is mandatory, one being Mississippi.

Among reorganization actions in the House of Delegates, it was voted to change the appointment of delegates to one per 1,250 AMA members from the present one per 1,000 members when the size of the House reaches 250. There are now 235 members among whom are 209 from the state associations and 26 from the scientific sections.

In the legislative area, the House asked that the requirement for hospitalization prior to admitting a patient to a nursing home under Part 1-A of Medicare be deleted from the law and that the word "receipted" be deleted from that portion relating to claim by a patient for reimbursement for medical service expense under Part 1-B. A request was adopted for a study to be made as to the constitutionality of Medicare. State and local medical societies were urged to assume leadership in the establishment of local advisory committees for the regional program in Heart Disease, Cancer, and Stroke.

### REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee concurred with pleasure in the commendation given by the President of the American Medical Association to our delegates to that body. We appreciate the revised format of their reports which recounts only pertinent policy actions. We approve the reports and recommend their adoption.

The report of the reference committee was adopted.

### ANNOUNCEMENT OF THE NOMINATING COMMITTEE

Following a recess for caucuses by association districts, the Nominating Committee was announced:

G. Lacey Biles, Sumner, District 1  
Joseph B. Rogers, Oxford, District 2  
Stanley A. Hill, Corinth, District 3  
A. A. Derrick, Jr., Durant, District 4  
Walter H. Simmons, Jackson, District 5  
Guy T. Vise, Meridian, District 6  
C. R. Jenkins, Laurel, District 7  
Leo J. Scanlon, Jr., Natchez, District 8  
C. D. Taylor, Jr., Pass Christian, District 9

Dr. Taylor was elected chairman by the committee which conducted open sessions on May 11, 1966, and posted the nominations at the headquarters hotel on that date.

### REPORT OF THE COUNCIL ON SCIENTIFIC ASSEMBLY

*Dr. James L. Royals: Organizations and Duties.* Your Council on Scientific Assembly is selected pursuant to Section 3, Chapter IX, By-Laws of the association and is charged with planning the annual session to include all phases of scientific activities. The council membership consists of the chairmen of the seven scientific sections and your Secretary-Treasurer. The President and President-elect are *ex officio* members.

*98th Annual Session.* Following the instructions of the House of Delegates in 1964, the present annual session is the second which has been planned and scheduled under the revised format of general scientific sessions instead of separate section meetings. With the exception of simultaneous sessions on pediatrics and EENT, the general scientific convocations do not conflict. There are eight such major presentations, including the special program feature. In addition, business meetings, including reference committee hearings, are so scheduled as to avoid conflict with the formal program of the state association. Your council hopes that these innovations will contribute to the convenience and pleasure of all in attendance.

*Symposium on Nuclear Medicine.* The special program feature, first initiated in 1962, remains popular. This year, we are fortunate in being able to present, in co-sponsorship with the United States Atomic Energy Commission, a Symposium on Nuclear Medicine. Outstanding authorities in this field will appear, and special scientific exhibits will be presented. In this connection, your council expresses appreciation to Dr. H. D. Bruner of the



Commission for his generous and untiring effort in making this symposium possible.

*Aesculapius Award.* For the first time in 1966, a new award for the scientific exhibit by a member or members adjudged best is being offered. It is the Aesculapius Award and is presented in co-sponsorship with the Mead Johnson Laboratories. Criteria for judging include originality, content quality, and excellence of presentation. In addition to a plaque, a cash honorarium of \$200 will be awarded. The winning exhibit will be identified on May 10, and the award will be made at the adjourned meeting of this House of Delegates on May 12. It is the hope of your council that the new award will stimulate presentation of scientific exhibits by the membership.

*Scheduling of Future Annual Sessions.* The Constitution of the association provides that the House of Delegates will select "the time and place for holding the annual session," except in emergencies when this authority is vested in the Board of Trustees. For many years, the House has followed the practice of selecting the time and place for the association's next annual session as one of the last items of business during the adjourned meeting.

Your council notes that it has become increasingly difficult to schedule any meeting of the association less than two years in advance. We have been experiencing difficulty in scheduling the 99th Annual Session for 1967, but we anticipate a resolution of this problem and a firm decision as to the time and place during the present annual session.

Most associations of our size schedule their annual meetings as far ahead as four to six years to assure the availability of the most desirable convention facilities. Because of the size and scope of our annual session, we are restricted to meeting at Jackson and the Gulf Coast. Your council has recommended to the Board of Trustees that a four year advance scheduling be adopted, and the Board has concurred. With the fact in mind that the 1967 annual session will be decided upon at this present meeting, your council recommends the following schedule:

100th Annual Session, Jackson, May 6-9, 1968

101st Annual Session, Gulf Coast, May 12-15, 1969

102nd Annual Session, Jackson, May 11-14, 1970

*Expression of the Council.* Your Council on Scientific Assembly began active organization and planning of the present annual session in July of 1965. We are deeply grateful for the support, assistance, and cooperation which we have received,

and we trust that the 98th Annual Session is professionally profitable and personally enjoyable for all.

#### REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Your reference committee commends the Council on Scientific Assembly for its effective and efficient organization of the 98th Annual Session. This year all reference committee meetings were scheduled on Monday afternoon to avoid conflict with the formal scientific program. Your reference committee believes that this has resulted in better attendance at both the reference committee meetings and the scientific sessions.

Your reference committee expresses appreciation to the United States Atomic Energy Commission for its substantial contribution to the scientific activities of the 98th Annual Session. Your committee feels that the Symposium on Nuclear Medicine was a highlight of the 98th Annual Session.

Your reference committee particularly notes the new Aesculapius Award which was established this year in co-sponsorship with the Mead-Johnson Laboratories. This award will be presented annually to the sponsor or sponsors of the most outstanding scientific exhibit presented at our meeting. The award, consisting of a permanent plaque and a \$200 honorarium, is only open to members of the association.

Your reference committee has given extensive consideration to that portion of the Council on Scientific Assembly's report dealing with scheduling future annual meetings of the association. For many years, this House of Delegates has followed the practice of selecting the time and place for the association's next annual meeting as one of the last items of business during the adjourned meeting. Because of the size and scope of our annual session, we are restricted to meeting at Jackson and the Gulf Coast.

The council has pointed out that it is becoming increasingly difficult to schedule any meeting of the association less than two years in advance, and that most associations of our size schedule their annual meetings as far ahead as four to six years. The council is, therefore, recommending, with the concurrence of the Board of Trustees, that a four year advance scheduling be adopted by this House of Delegates.

In preparing a four year schedule for consideration by this House, the council sought to follow the customary procedure of the House to alternate annual meetings between Jackson and the Gulf Coast and to conduct the annual meeting beginning the second Monday in May. The council was un-

able, however, to tentatively schedule the 99th Annual Session at the Buena Vista Hotel the second Monday in May, 1967, because of this week being assigned to another association for their convention. The council, therefore, reports after reviewing all available convention facilities on the Gulf Coast that the association has two choices in scheduling its 1967 annual meeting: (1) Either the convention can be postponed a week to accept an invitation from the Buena Vista Hotel to hold our annual meeting there beginning the third Monday in May, or (2) The association can accept an invitation from the Edgewater Gulf Hotel to meet there beginning the second Monday in May.

Your reference committee, in considering these alternatives for scheduling the 99th Annual Session and arriving at a four year advance schedule of annual sessions, has had the benefit of a presentation by the convention manager of the Edgewater Gulf Hotel. Additionally, members of the Coast Counties Medical Society have appeared before the committee and discussed the feasibility of holding the 99th Annual Session at the Edgewater Gulf Hotel. Your reference committee has been impressed by the plans of the Edgewater Gulf Hotel's management to expand and modernize existing facilities. This hotel is under new management and, in the words of its convention manager, "plans to become the best convention hotel on the coast."

We feel, however, that the association would be best advised to postpone consideration of the Edgewater Gulf Hotel for an annual session meeting until renovation and expansion of the facility is accomplished. Therefore, your reference committee recommends that (1) The House of Delegates accept the Buena Vista Hotel's invitation for the association to meet there beginning the third Monday in May, 1967 (May 15-18) and that (2) The House of Delegates adopt the following four year advance schedule of annual session meetings:

99th Annual Session, Gulf Coast, May 15-18, 1967

100th Annual Session, Jackson, May 13-16, 1968

101st Annual Session, Gulf Coast, May 12-15, 1969

102nd Annual Session, Jackson, May 11-14, 1970

The report of the reference committee was adopted.

*Dr. Guy D. Vise: Council Organization and Duties.* The Council on Medical Service is responsible for the study of all aspects of medical care and the circumstances under which it is provided. It is a constitutional body of the House of Delegates, elected under the provisions of Section 2, Chapter IX, By-Laws of the association. The council has seven constitutional and one *ad hoc* committees under its jurisdiction. The committees are:

(a) *Constitutional Committees.* Cancer Control, Occupational Health, Federal Medical Services, Maternal and Child Care, Mental Health, Diseases of the Heart, and Aging.

(b) *Ad Hoc Committee.* Blood and Blood Banking.

*Activities of the Council.* Apart from work and projects of its several committees, your council was concerned with a number of separate tasks. These are included as supplemental reports as follows:

(a) *Teaching Programs in Charity Hospitals.* A status report on the council's teaching programs in charity hospitals project is presented as *Supplemental Report 8-A*.

(b) *Public Law 89-97, Parts 1-A and 1-B.* An informational report on regulations issued by the Secretary of HEW for operation of Parts A and B, Public Law 89-97 is presented as *Supplemental Report 8-B*.

(c) *Public Law 89-97, Title XIX.* An informational report on Title XIX, Public Law 89-97 is presented as *Supplemental Report 8-C*.

*Committees of the Council.* Programs, studies, and activities of your council's several committees embrace a wide range of subject areas and policy development. These are:

(a) *Committee on Mental Health.* In accordance with actions of this House of Delegates, the Committee on Mental Health has served in an advisory capacity to the Mississippi Mental Health Planning Council since its formation in 1963 to develop a comprehensive mental health and retardation plan for Mississippi. The committee's members have devoted many hours to this task and to the task of keeping the association informed on the many aspects of this important program.

(1) *Report of the Mississippi Mental Health Planning Council.* The Mississippi Mental Health Planning Council issued a comprehensive mental health and retardation plan for Mississippi early this year. Much publicity has been given to the content of the Council's plan by the Mississippi press. Your council would, however, invite the



House of Delegates' attention to some of the specific highlights of the plan:

The plan divides the state into nine mental health and retardation regions. The core complex in each region will consist of a facility of 100 beds or less for acute short-term care, outpatient services, and evaluation services for the retarded. Each facility will provide the following services: outpatient services to include 24 hour emergency services and aftercare services; inpatient services; partial hospitalization (day-night services); consultation services; and vocational rehabilitation services.

It should be stressed that the basic philosophy of the Planning Council in formulating a mental health and retardation plan for Mississippi was to provide comprehensive, community centered mental health and retardation services. Initiation of the plan will require constructive and unified action at the local level and your council understands that such action is already in progress in various parts of the state. To assist interested communities in developing and coordinating their mental health and retardation plans, the Mississippi Legislature has created an Interagency Commission on Mental Illness and Mental Retardation. This commission is composed of the executive officers of the following state agencies: Board of Trustees of Institutions of Higher Learning, Board of Trustees of Mental Institutions, Board of Public Welfare, Board of Education, Board of Health, and the designated state mental illness and mental retardation facility construction agency.

(b) *Committee on Maternal and Child Care.* The Committee on Maternal and Child Care has continued its study of maternal deaths in Mississippi. Thirty-five maternal death cases were reviewed and evaluated by the committee during the year. On the date of its last meeting, March 3, 1966, the committee had sent out 468 inquiries on maternal deaths since the maternal mortality study began in 1958. Replies have been received in 389 or 83.1 per cent of these cases.

During the past year, procedures have been set in motion to improve the speed and completeness of data obtained for the maternal mortality study project. These include (1) identifying suspected maternal deaths more quickly to facilitate promptly initiated scientific study by requesting data while the information is easily recalled by the attending physician, (2) selection of physicians as consultants to the committee in a designated "pilot" area of the state so that further inquiries can be made on specific maternal deaths where sufficient data is lacking, and (3) communicating with the medical staffs of approved hospitals in Mississippi to apprise them of the com-

mittee's study and encourage their cooperation in the study.

Your council announces with regret that the chairman of the Committee on Maternal and Child Care, Dr. Michael Newton of Jackson, has resigned effective June 1, 1966. Dr. Newton will assume the directorship of the American College of Ob-Gyn on June 1. Your council wishes to commend him for his substantial leadership as chairman of the Committee on Maternal and Child Care during these past seven years. During his tenure of office, this committee has been one of the most active and effective committees in the association.

(3) *Committee on Occupational Health.* The Committee on Occupational Health has continued in its study of occupational health programs in small plants in Mississippi under prior authorities granted by your council and the House of Delegates. Data on occupational health programs have been obtained from 121 plants in Mississippi. The committee is in the process of refining this data and initiating such substudies as may be indicated in bringing this study project to a final reporting state.

(d) *Committee on Blood and Blood Banking (ad hoc).* The Committee on Blood and Blood Banking continues to monitor and compile data on blood banking and transfusion services in Mississippi. As proposed by the committee last year and approved by this House of Delegates, the committee in cooperation with the Mississippi Hospital Association conducted the Second Administrative Seminar on Blood Banking and Transfusion Service at Jackson on August 12, 1965.

(e) *Committee on Diseases of the Heart.* The chairman of this committee is participating in planning for the Mississippi Conference on Cardiovascular Diseases to be held in Jackson May 24-25, 1966. Information on this important meeting has been mailed to the membership.

(f) *Committees on Cancer Control, Diseases of the Heart, Aging, and Federal Medical Services.* Your council in reviewing the activities of these committees for the past few years finds that they have not generally been engaged in any projects requiring the mechanism of a formal constitutional committee of the association. Additionally, even though some of the members of these committees have served and continue to serve on meritorious projects concerning their committee's area of interest, there has not been a need even in these instances for a formal meeting of their respective committees. In the meantime, your council goes through the formalities of appointing members to serve on these committees each year.

## HOUSE OF DELEGATES / Continued

Your council has reviewed the advisability of continuing these committees as constitutional bodies of the association in the light of their apparent inactivity and the council's constitutional authority to appoint committees on an *ad hoc* basis when needed. It has been your council's experience that an *ad hoc* committee is usually a working committee because it is appointed to accomplish a specific task. Your council recommends that Chapter IX, Section 2, By-Laws MSMA, be amended to delete the Committees on Cancer Control, Diseases of the Heart, Aging, and Federal Medical Services as constitutional committees of the association. Your council assures the House of Delegates in this regard that it will closely monitor the areas of interest covered by these committees and appoint such *ad hoc* committees as are needed.

### REPORT OF THE REFERENCE COMMITTEE ON MEDICAL PRACTICES

Your reference committee commends the Council on Medical Service for the enormous amount of work carried on by this elected body of the House of Delegates. We have carefully considered the reports of the council's several committees and approve these reports with the following additional recommendations.

First, during discussion regarding the newly created Interagency Commission on Mental Illness and Mental Retardation, it was brought to your reference committee's attention that this commission had only one physician-member. Your reference committee recommends that the association endeavor to obtain more medical representation on this commission.

Secondly, the council has reported with regret that the chairman of its Committee on Maternal and Child Care, Dr. Michael Newton of Jackson, has resigned effective June 1, 1966. Dr. Newton will assume the directorship of the American College of Ob-Gyn on June 1. During Dr. Newton's tenure of office, the Committee on Maternal and Child Care has been one of the most active and effective committees in the association. Your reference committee recommends that this House of Delegates specifically associate itself with the council's commendation and good wishes for Dr. Michael Newton.

The report of the reference committee was adopted.

### SUPPLEMENTAL REPORT "A" OF THE COUNCIL ON MEDICAL SERVICE

*Dr. Guy T. Vise: Background.* At the 97th Annual Session, the council reviewed its work on the teaching program project beginning with approval

of the project by the House of Delegates in 1962. Additionally, the council reported on a recent on-site study of the teaching programs conducted by the L.S.U. and Tulane Schools of Medicine in Louisiana's charity hospitals and made the following observations in this connection: (a) both institutions believe their teaching programs have dramatically improved patient care in Louisiana's charity hospitals; (b) both institutions are enthusiastic about the value of their charity hospital training programs and generally satisfied with their operation; (c) both institutions report that their interns and residents are satisfied with the training programs; and (d) both institutions feel that their charity hospital training programs have led to better professional and public relations.

Based upon the data it had compiled on the teaching program project, the council requested and received the approval of the House of Delegates to begin formal meetings with public and private groups concerned with the operation of the proposed teaching program.

*Meeting with UMC Officials.* Members of the council met with Dean Robert Q. Marston immediately prior to his resignation to accept appointment as director of the new heart disease, cancer, and stroke program. This meeting was devoted to a review of the teaching program project. At the request of the council, Dean Marston agreed to appoint a committee to work with the council and this has recently been informally discussed with the Acting Dean of the University of Mississippi School of Medicine, Dr. John A. Gronvall. Dr. Gronvall has stated his desire to assist the council and your council plans to have an early meeting with the UMC committee.

*Increased Funds for Medical Schools.* Your council believes it is pertinent to the teaching program project to invite the House of Delegates' attention to the numerous federal grant programs for medical schools passed by the present 89th Congress. For the first time, federal grants are being made to medical schools for the specific purpose of "improving the quality of their educational programs and increasing their student enrollment." Additionally, increased funds are available for construction, replacement, and rehabilitation of medical training facilities. The new heart disease, cancer, and stroke program which provides 100 per cent planning funds and 90 per cent construction funds requires medical school participation.

Other federal funds are available for everything from medical libraries to nurses training. Within broad guidelines, medical schools will be allowed to choose what programs most of these new federal funds will be devoted to.



## REPORT OF THE REFERENCE COMMITTEE ON MEDICAL PRACTICES

Your reference committee has reviewed the extensive amount of work the council has devoted to the teaching project. The council has reported that it is working toward setting up a liaison committee with the University of Mississippi School of Medicine's faculty to work on the teaching program project. Your reference committee recommends that this House of Delegates restate emphatically its 1964 policy statement on this project. That is:

"The House of Delegates recommends implementation of the proposed teaching programs. We feel that the program will benefit the state, increase teaching opportunities, and upgrade the quality of care in the (state's) charity hospitals. We urge the support of University authorities in this connection."

Your reference committee further recommends that the council pursue a course of active liaison with the University of Mississippi School of Medicine on this project as soon as a permanent Dean is named for the University.

The report of the reference committee was adopted.

### SUPPLEMENTAL REPORT "B" OF THE COUNCIL ON MEDICAL SERVICE

*Dr. Guy T. Vise: Background.* In July of 1965, Congress passed H. R. 6675, the Social Security Amendments of 1965, and President Johnson signed the bill into law as Public Law 89-97. Public Law 89-97 amends many provisions of the Social Security Act and establishes two new titles within the Act. One of these new titles is Title XVIII, popularly known as Medicare. This report will summarize provisions of this title and discuss certain operational features of these provisions.

*Provisions of Title XVIII.* Title XVIII establishes a program of federally financed health care for all persons 65 years of age and over who are citizens of this country or who are aliens that have resided in this country for five or more years. Two categories of benefits are provided which are called Part A and Part B benefits. Part A benefits are to be financed by increased Social Security taxes and are automatically available to the 65 and over age group. Part B benefits are to be financed by a monthly premium to be equally split between the government and those persons in the 65 and over age group who contract to be covered by Part B.

(a) *Part A Benefits.* Part A benefits consist of the following, all of which become effective July 1, 1966, except for item (2) which becomes effective January 1, 1967:

(1) 90 days of inpatient hospital care during a spell of illness. (Note: A spell of illness begins the first day a recipient enters the hospital and ends after the recipient has been out of a hospital or extended care facility for 60 consecutive days.) The patient is responsible for the first \$40 of charges and after 60 days, he is responsible for \$10 per day of charges.

(2) 100 days of post-hospital extended care in a skilled nursing facility during a spell of illness. The patient is responsible for \$5 per day of charges after 20 days. (Note: A recipient must have been a hospital patient for at least three days before he is eligible for this benefit.)

(3) 100 visits annually by personnel of a home health agency, i.e., visiting nurse; speech, occupational and/or physical therapist; and home health aide. (Note: A recipient must have been a hospital patient for at least three days before he is eligible for this benefit.)

(4) Outpatient hospital diagnostic services. The patient is responsible for the first \$20 and 20 per cent of the remaining charges during a 20 day period.

It can be seen from the above that Part A benefits are all institutional benefits. Hospitals, skilled nursing homes, and home health care agencies participating in Part A will be known as "providers of care." To become "providers of care," they will have to meet certain statutory requirements and "such other reasonable rules and regulations as are established by the Secretary of HEW in the interest of health and safety." These are known as "Conditions of Participation." Additionally, since this is a federally funded program, "providers of care" will have to sign the Civil Rights Compliance Pledge.

Copies of the "Conditions of Participation" have now been furnished to all hospitals, nursing homes, and home health agencies in the United States. Those wishing to become "providers of care" will apply for inspection and certification by the Department of HEW. In Mississippi, as in most states, the state department of health will serve as the inspection agency for the Department of HEW.

Hospitals, nursing homes, and home health agencies can be found to be in full compliance with all requirements for participation as "providers of care" in which case they will be certified for a two year period or they can be found to be in "substantial compliance" with requirements for participation in which case they will be certified for a period not to exceed 18 months. In the latter case, the "provider of care" will have to show efforts to correct those deficiencies which prevent-

## HOUSE OF DELEGATES / Continued

ed it from being in full compliance with all requirements for participation.

It should be particularly noted that all hospitals accredited by the Joint Commission on Accreditation of Hospitals will be presumed to meet all requirements for certification as "providers of care" except the requirement dealing with utilization review. Under this requirement, both hospitals and skilled nursing homes will be required to have a formal committee to review admissions, discharges, and professional services rendered on a sample or other basis in the light of the medical necessity for such services. The utilization review committee must be composed of at least two physicians.

"Providers of care" will be paid their reasonable costs for services provided to recipients of Part A. Reasonable costs will be the institution's actual per diem costs and can include such items as bad debts, etc.

*Summary of Part A.* Hospital, outpatient diagnostic, and home health care services are to be provided to over 210,000 Mississippians beginning July 1, 1966. On January 1, 1967, skilled nursing home services will be added. These services will be paid for by the Federal Government when they are rendered by hospitals, skilled nursing homes, and home health agencies who have qualified as "providers of care." Utilization review will be an important new factor in the medical environment. A utilization review committee must have at least two physicians among its members. It can also be composed entirely of physicians.

(b) *Part B Benefits.* Part B benefits consist of the following, all of which become effective July 1, 1966:

(1) Professional services rendered by a physician such as diagnosis, therapy, surgery, consultation, and home, office, and institutional calls.

(2) Diagnostic services.

(3) Home health care services rendered by personnel of a home health care agency, i.e., nurses; speech, occupational and/or physical therapist; and home health aide.

(4) Prosthetic appliances.

The patient is responsible for the first \$50 of annual charges for the above benefits. Part B will then pay 80 per cent of remaining charges and the patient will pick up the other 20 per cent of charges. Part B will be administered by "carriers" selected by the Secretary of HEW. In Mississippi, the Travelers Insurance Company will serve as Part B "carrier."

Part B payments will be based on reasonable charges. Reasonable charges will take into ac-

count the customary charges made by the physician and the prevailing (usual) charges of other physicians in the locality. A Part B beneficiary may assign his medical payment to his physician in which case payment will be made directly to the physician. Both the patient and the physician must agree to the assignment. The physician who accepts an assignment also accepts the carrier's reasonable charge as his full charge.

When the patient or physician wishes the payment for services to be made directly to the patient, a receipted bill must be presented to the carrier. As with an assignment, payment will then be based on reasonable charges but the physician does not agree to accept the reasonable charge as his full charge.

The claim form for physicians' services under Part B has been finalized. It is a one page form consisting of 13 items to be completed by the physician and patient. A physician may present an itemized bill covering services rendered to a Part B beneficiary in lieu of the claim form.

*Summary of Part B.* Physicians' services, diagnostic services, prosthetic appliances, and home health care services are to be provided to approximately 170,000 Mississippians beginning July 1, 1966. Physicians' services will be paid for by the Travelers Insurance Company on a reasonable charge basis. Payment may be made either to physician or to patient; however, in the latter case, a receipted bill will have to be presented for payment. A 13-item claim form has been developed for Part B services.

### REPORT OF THE REFERENCE COMMITTEE ON MEDICAL PRACTICES

The council has presented an excellent summary of Title XVIII, Public Law 89-97, popularly known as the Medicare Bill. Your reference committee had the benefit of extensive discussion of this subject. During this discussion, it was brought to your reference committee's attention that "home health agencies" under this law can be either public or private non-profit agencies. At the present time there are no home health agencies existing in Mississippi.

Your reference committee understands, however, that the Mississippi State Board of Health plans to organize Medicare home health services in several counties in the state. Your reference committee recommends that should the State Board of Health offer home health services under Medicare, that it only do so in those counties where private home health agencies do not exist or are not planned.

The report of the reference committee was adopted.



SUPPLEMENTAL REPORT "C" OF THE  
COUNCIL ON MEDICAL SERVICE

*Dr. Guy T. Vise: Background.* In 1960, Congress passed the Kerr-Mills Bill as a "compromise measure" to the then-pending Forand Bill. The general purpose of the Kerr-Mills Bill was to help those persons 65 years of age and over who might need financial assistance at one time or another in meeting part or all of their medical care costs (the medically needy). In contrast to this, the Forand Bill proposed to provide certain medical services to all persons 65 years of age and over regardless of need. Kerr-Mills could not operate in any state unless the state's legislature passed an enabling act and appropriated funds to be matched by the federal government. The federal government's financial participation was based on a per capita income/population formula. Under the formula, Mississippi was eligible to receive \$4 in federal funds for each \$1 of state funds appropriated for a Kerr-Mills program.

In addition to establishing this new program for the medically indigent called "Medical Assistance for the Aged," the Kerr-Mills Law established a new federal grant to the states called the "Federal Medical Percentage." This Federal Medical Percentage was applicable to state payments to vendors (providers) of medical care on behalf of persons on Old Age Assistance.

In summary, it was the intent of supporters of the Kerr-Mills Law to (a) provide federal funds for a new federal-state matching program for the medically indigent among the aged (Medical Assistance for the Aged) and (b) to encourage the states to improve their medical vendor programs in behalf of persons on Old Age Assistance by providing new federal funds for this purpose.

*Kerr-Mills in Mississippi.* When the Kerr-Mills Bill was passed, Mississippi was one of several states not making medical vendor payments under its Old Age Assistance program. In 1961, funds were transferred from the State Hospital Commission program for use by the State Department of Public Welfare in making medical vendor payments to hospitals in behalf of Old Age Assistance recipients. The department paid up to \$15 per diem for a maximum of 15 days of hospital care for acute illness or injury. In January of 1962, the per diem was raised to \$18 and the maximum number of days to 20. The 18-20 maximum continues in effect today. In 1964, the same benefits were extended to persons 65 years of age and over who were on the Aid to the Blind program.

Thus, the State of Mississippi since 1961 has had a limited implementation of one of the two provisions of the 1960 Kerr-Mills Law. Namely, the state has implemented a hospital payment pro-

gram on behalf of persons on Old Age Assistance and persons who are 65 years of age and over who are receiving Aid to the Blind. This program qualifies for federal funding under the Federal Medical Percentage provisions of the Kerr-Mills Law.

In 1964, the Mississippi Legislature passed an enabling act to implement the Medical Assistance for the Aged provisions of the 1960 Kerr-Mills Law. However, no funds were appropriated to operate the program and when Public Law 89-97 (Medicare) was passed in July of 1965, Mississippi was one of 10 states not having an operational Medical Assistance for the Aged program.

*Public Law 89-97 (Public Assistance Amendments).* Your council noted in its Supplemental Report 8-B that Public Law 89-97 established two new titles in the Social Security Act. Supplemental Report 8-B concerns the title popularly known as Medicare, Title XVIII. Of perhaps even greater importance to the medical profession is the other new Title of Public Law 89-97, Title XIX. This title extends the Kerr-Mills concept to everyone regardless of age and sets more stringent standards for federal financial participation in state medical vendor programs. Title XIX may be summarized as follows:

(a) The states have the option of setting up a Title XIX program between January 1, 1966, to December 31, 1969, or continuing their present federal-state public assistance medical vendor programs under present laws. After December 31, 1969, however, federal grants will only be made to states for medical care provided under provisions of Title XIX.

(b) A state must follow the following priority system in setting up a Title XIX program: First, provide medical vendor payments in behalf of recipients of the four category assistance programs, i.e., Old Age Assistance, Aid to the Blind, Aid to Permanently and Totally Disabled, and Aid to Families with Dependent Children. Second, extend the Kerr-Mills concept of Medical Assistance for the Aged (the medically needy) to the blind, the permanently and totally disabled, and to families with dependent children—persons in these groups would be on the edge of qualifying for either Old Age Assistance or Aid to the Blind or Aid to the Permanently and Totally Disabled or Aid to Families with Dependent Children. Third, make some provision by January 1, 1975, at the states own expense for those persons between the ages of 21 and 64 who do not qualify under the first and second provisions above but who are medically needy.

(c) Effective June 30, 1967, any state making medical vendor payments under Title XIX in be-

## HOUSE OF DELEGATES / Continued

half of recipients of Old Age Assistance, Aid to the Blind, Aid to the Permanently and Totally Disabled, or Aid to Families with Dependent Children must include payment for the following services: inpatient hospital services, out-patient hospital services, skilled nursing home services (this is required for adults only), diagnostic services, and physicians' services.

(d) Mississippi will receive over \$4 in federal funds for each \$1 in state funds allocated to a Title XIX program.

*Effect of Title XIX in Mississippi.* As with the original Kerr-Mills Law of 1960, implementation of Title XIX in Mississippi will require enabling legislation and a state appropriation. An enabling act has been introduced in the present session of the Mississippi Legislature. Should the state fail to set up a Title XIX program by the end of 1969, it will lose the federal funds it is presently receiving to operate its vendor medical payment program to hospitals on behalf of Old Age Assistance recipients and recipients of Aid to the Blind who are 65 years of age and over. On July 1 of this year, this program will consist of meeting the deductibles imposed by Medicare for institutional services rendered to these public assistance recipients.

Should the state implement a Title XIX program, many of the recipients of present state-supported medical care programs such as the State Hospital Commission program will come under the provisions of Title XIX. It is reasonable to expect that the state could provide more comprehensive medical care services to these recipients with the increased funds that would be available due to federal matching of state funds expended under Title XIX.

*Recommendation of the Council.* Your council respectfully recommends that the House of Delegates carefully consider the provisions of Title XIX. Your council would invite the House of Delegates' attention to the following factors which seem pertinent to any official action in regard to Title XIX:

(a) The House of Delegates has previously endorsed the Kerr-Mills Law and recommended that it be fully implemented in Mississippi.

(b) Title XIX is an extension of the Kerr-Mills principle. Briefly stated, that principle is to assist the medically needy in meeting part or all of the costs of necessary medical care through a federal-state program of medical vendor payments in their behalf.

(c) Kerr-Mills was the rallying point for those opposed to implementation of a federal program of medical care for all persons 65 years of age and over regardless of need. It is reasonable to expect that Title XIX will now become the rallying point for those opposed to extension of the newly enacted Medicare program to persons under 65.

### REPORT OF THE REFERENCE COMMITTEE ON MEDICAL PRACTICES

Your reference committee carefully considered the Council's informational report on the new Title XIX Program. Whether or not Title XIX of Public Law 89-97 is implemented in Mississippi is a matter that must be decided by the Legislature. Your reference committee emphasizes that where this title is implemented, administration and control of the program, with the exception of certain minimums as to services offered, are vested in the state through a single state agency. If this title is implemented in Mississippi, your reference committee believes that the association has not only a legitimate interest in the operation of the program, but an obligation and duty in this connection as well. We, therefore, urge that a means be provided for medical representation and advice by and under association policy.

The report of the reference committee was adopted.

### REPORT OF THE COMMITTEE ON AMA-ERF

*Dr. Raymond F. Grenfell: Organization and Duties.* Your Committee on AMA-ERF is composed of one member from each component medical society appointed annually by the president of our association. The committee works in conjunction with the American Medical Association-Education and Research Foundation and solicits voluntary contributions from Mississippi physicians for medical education and research. All contributions are tax deductible and every dollar received is put to work in a medical school of the donor's choice.

*1965 Contributions.* Your committee is happy to report that Mississippi physicians contributed \$4,722.90 to AMA-ERF during 1965. Our University of Mississippi School of Medicine's AMA-ERF allocation for 1965 was \$10,777.00. Over 60 per cent of this amount represented contributions from Mississippi physicians, the remainder was the University's share of undesignated contributions.

*Medical Education Loan Guarantee Program.* The AMA-ERF Loan Guarantee Program experienced its third successive year of increased loan activity in 1965. Number of loans made totaled



8,213, an increase of 11 per cent over loans granted in 1964. Number of loans to Mississippi medical students, interns, and residents totaled 222, compared to 203 in 1964. These 222 loans had a principal value of \$259,500.

*Contribution from Central Medical Society.* Your committee would especially invite the House of Delegates' attention to an exceptional contribution to AMA-ERF from one of the association's local societies. Last September, the Central Medical Society made a \$24,948.80 AMA-ERF contribution to the University of Mississippi School of Medicine. This amount represented surplus funds from that society's Sabin Polio Vaccine program.

*1966 Program.* Your committee earnestly solicits a contribution to AMA-ERF from every Mississippi physician in 1966. We note the policy of a number of our component medical societies to devote a portion of one meeting each year to an appeal for AMA-ERF contributions. Your committee commends this policy to all component societies.

#### REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Your reference committee is pleased to note the support given AMA-ERF by physicians in this state, and urges continued contributions to this worthy program. We approve this report and recommend its adoption.

The report of the reference committee was adopted.

#### RESOLUTION NO. 1, IN MEMORIAM

*Dr. James L. Royals:* WHEREAS, There are absent from among our numbers 23 members who have been called by Divine Providence since the 97th Annual Session; and

WHEREAS, Although we are grieved upon the passing of these beloved colleagues and friends, we are inspired by their lives of service and professional attainment; and

WHEREAS, This expression of our grief, deep affection, and respect should be recorded permanently among official records of the Mississippi State Medical Association, now, therefore, be it

*Resolved,* That this House of Delegates does mourn the passing of the following esteemed colleagues:

Aubrey A. Aden, Indianola, June 6, 1965  
John W. Brandon, Jr., Woodville, March 22, 1966  
Norman Burnstein, Jackson, October 18, 1965  
John C. Culley, Oxford, January 31, 1966  
John D. Davenport, Ocean Springs, June 20, 1965  
Charles W. Emerson, Hernando, June 26, 1965  
Samuel E. Field, Sr., Centreville, April 7, 1966

Robert L. Fowler, Marion, October 10, 1965  
Archie E. Gordin, Pass Christian, January 4, 1966  
Walter P. Gray, Waynesboro, December 10, 1965  
Byron B. Harper, Itta Bena, September 29, 1965  
James M. Hood, Houlika, August 17, 1965  
John H. Kellis, Shuqualak, April 4, 1966  
Louis M. Magee, Gulfport, December 8, 1965  
Konrad P. Mangold, Yazoo City, August 1, 1965  
William R. Mitchum, Jr., Meridian, July 9, 1965  
Robert M. Moore, Vicksburg, August 5, 1965  
Robert B. Ray, Kosciusko, June 8, 1965  
Oscar E. Ringold, Cleveland, November 19, 1965  
H. Lowry Rush, Sr., Meridian, June 20, 1965  
Jacob S. Ullman, Natchez, November 17, 1965  
Benjamin N. Walker, Jr., Jackson, October 18, 1965  
James I. Woodward, Picayune, July 12, 1965

#### ACTION OF THE HOUSE OF DELEGATES

Without objection, Resolution No. 1 was acted upon without referral and adopted by the House of Delegates standing in silent tribute.

#### RESOLUTION NO. 2, CIRCUMSTANCES FOR PROFESSIONAL COMPENSATION OF PATHOLOGISTS

*Dr. Leo J. Scanlon, Jr.:* WHEREAS, The Mississippi State Medical Association has affirmed that "the practice of pathology is the practice of medicine in all relevant senses and (that it) does reject any definition that would seek to portray the practice of any medical discipline as a hospital service," and

WHEREAS, The American Medical Association has taken the policy position that "a physician should not dispose of his professional attainments or services to any hospital, corporation, or lay body by whatever name called or however organized under terms and conditions which permit the sale of the services of that physician by such agency for a fee," and

WHEREAS, The College of American Pathologists has taken the position that pathologists should continue to render professional services within their sphere of specialty interest to the best of their individual abilities and bill for such professional services regardless of where the services are rendered, and

WHEREAS, These principles are recognized in and incorporated in the provisions of Title XVIII, Public Law 89-97, in addition to ethical and other legal bases predating this enactment, now, therefore, be it

*Resolved,* That the Mississippi State Medical Association does reaffirm its prior position that the practice of pathology is the practice of medicine in all relevant senses and believes that separate

billing for their professional services should be made, that mutual working agreements into which pathologists enter should uphold these principles and meet pertinent and applicable ethical criteria, and that the application of these principles in practice should not operate to increase the total cost of pathological services.

REPORT OF THE REFERENCE COMMITTEE  
ON MEDICAL PRACTICES

Your reference committee has considered Resolution No. 2 titled "Circumstances for Professional Compensation of Pathologists." This resolution asks that the association reaffirm its position that the practice of pathology is the practice of medicine in all relevant senses and rejects any definition that would seek to portray the practice of any medical discipline as a hospital service. The resolution further incorporates certain provisions of Title XVIII, Public Law 89-97, dealing with pathological services and other ethical and legal bases predating this enactment. Your reference committee recommends that Resolution No. 2 be adopted.

The report of the reference committee was adopted.

## RESOLUTION NO. 4, AMA DUES INCREASE

*Dr. Andrew J. Carroll:* WHEREAS, Dues of the American Medical Association are currently fixed at \$45 per year, having been raised to this level from \$25 per year in 1961, and

WHEREAS, Thirteen state medical associations, including the Mississippi State Medical Association, require mandatory AMA membership concurrently with membership in the state medical association, and

WHEREAS, The AMA Board of Trustees reports that budgetary needs have risen to \$27,000,000 per year and that a deficit of \$1,000,000 was incurred in 1965, thereby requiring a dues increase of \$25 per year to a total annual dues rate of \$70, and

WHEREAS, This substantial dues increase has not, in the opinion of many AMA members in Mississippi, been fully justified by sufficient documentation, now, therefore, be it

*Resolved,* That the House of Delegates of the Mississippi State Medical Association does instruct our Delegates to the American Medical Association to oppose the pending dues increase and that this House of Delegates does express its approval for our Delegates having opposed the increase when it was initially announced at the 1965 AMA clinical convention.

Your reference committee considered Resolution No. 4 which was introduced in behalf of the South Mississippi Medical Society and which expresses opposition to the pending increase in AMA dues from \$45 per year to \$70 per year.

In approving this resolution, your reference committee recommends that the resolving clause be amended to read as follows:

*"Resolved,* That the House of Delegates of the Mississippi State Medical Association does request our Delegates to the American Medical Association to oppose the pending dues increase and that this House of Delegates does express its approval for our delegates having opposed the increase when it was initially announced at the 1965 AMA Clinical Convention."

The report of the reference committee was adopted.

RESOLUTION NO. 5, MEDICARE BILLING  
PROCEDURE

*Dr. H. C. Ricks:* WHEREAS, Public Law 89-97, known as Medicare, provides for voluntary participation for all citizens over age 65 of the United States except those who draw Social Security benefits, and also provides for free choice of physician and for free choice of patient, therefore, be it

*Resolved,* That the following procedure is recommended for guidance of the physician members of the Mississippi State Medical Association.

(1) Make your own decision as to whether you will serve a given patient.

(2) Make financial arrangement for the patient to pay his or her fee for services rendered directly to you.

(3) Sign necessary forms for the patient so that he or she may seek payment from the program.

Nothing in this resolution should be interpreted as an effort to coerce any physician member in his activities in rendering services to people covered by the Medicare program.

REPORT OF THE REFERENCE COMMITTEE  
ON MEDICAL PRACTICES

Your reference committee has carefully considered Resolution No. 5 titled, "Medicare Billing Procedure." The committee had the benefit of extensive discussion of this resolution by numerous witnesses. Each witness spoke earnestly, forcefully, temperately, and with personal concern for the American public. Resolution No. 5 seeks to recommend certain procedures for physicians to



follow in the physician-medicare patient relationship. In considering Resolution No. 5, your reference committee has been guided by a principle which this House of Delegates adopted with respect to Medicare at its December, 1965, meeting. At that time, the House stated:

"The Mississippi State Medical Association has both a duty and obligation to its members who will participate in Medicare and to its members who will not participate to employ its full resources and capacities to see that the legal and ethical intentions of each group are represented to the best of the association abilities."

Your reference committee has considered the context of Resolution No. 5 in the light of the above action by this House of Delegates. Your committee recommends that Resolution No. 5 be not adopted and that in lieu of this resolution the House of Delegates adopt the following statement as the official position of the Mississippi State Medical Association regarding the relationship of physicians to Medicare:

(1) The individual physician is ethically free to select his patients: (a) He may decline to render medical services to persons covered by the "Health Insurance for the Aged Act"; (b) He may choose to treat such persons without charge; (c) He may treat patients with the advance understanding that he will look to them exclusively for payment and that he will or will not in any way help them in obtaining reimbursement for the cost of his services or the cost of associated services; (d) He may render medical services to persons covered by the "Health Insurance for the Aged Act" and accept an assignment of benefits payable by the Medicare carrier.

(2) The Mississippi State Medical Association opposes any program of dictation, interference, or coercion, whether direct or indirect, affecting the freedom of choice of the physician to determine for himself the manner or financial arrangement under which he shall provide medical care to patients under Public Law 89-97.

Your reference committee further recommends that the association take appropriate action to inform physicians regarding the options of payment for services available to them under Public Law 89-97 and its regulations. Each physician should decide for himself in each instance the method of compensation he prefers. Each physician should be fully informed as to the merits and limitations of billing patients directly for services versus the accepting of an assignment to enable payment to the physician by a federally designated intermediary. Your reference committee recommends direct billing to the patient whenever this

is determined to be feasible by the attending physician.

The chairman of the reference committee moved adoption of the report. In discussion, Dr. George E. Twente of Jackson moved that the following be substituted for the report of the reference committee:

"*Resolved*, That the House of Delegates of the Mississippi State Medical Association recommend to the practicing physicians of the state:

(1) That insofar as possible, they, the physicians, deal directly with the patient, and

(2) That the patient receive his Medicare benefits from the carrier by presentation of a receipted bill."

The substitute motion was seconded by Dr. Eldon L. Bolton of Biloxi. Inquiries for information on the pending business were made by Dr. Maxwell D. Berman of Jackson and Dr. Byron A. Mayo of Drew. Dr. G. Swink Hicks of Natchez asked Dr. Twente if it were the intent of his substitute motion that no physician should accept an assignment. Dr. Twente responded by restating the substitute motion, and Dr. Temple Ainsworth of Jackson pointed out that the first portion of the motion contained the phrase "insofar as possible." Dr. Walter H. Simmons of Jackson spoke in support of the report of the reference committee.

Dr. S. H. McDonnieal, Jr., of Jackson moved that all members of the association be informed of options provided in the law (Public Law 89-97) as to methods of billing and that they understand that acceptance of an assignment means that the carrier's fee will have to be accepted. The motion was lost for lack of a second.

The Speaker put the substitute motion which was adopted, thereby disposing of the main motion to adopt the report of the reference committee.

#### RESOLUTION NO. 7, COUNCIL ON SCIENTIFIC ASSEMBLY

*Dr. James L. Royals:* WHEREAS, The Council on Scientific Assembly is charged with planning the annual sessions of the association to include all scientific activity and the programming and scheduling of annual session events, and

WHEREAS, The By-Laws of the association now provide for the several scientific section chairmen and secretaries who serve on the Council on Scientific Assembly to have a tenure of office of one year, and

WHEREAS, The programming and scheduling of speakers and activities for an annual session meeting requires extensive planning and coordination which considers both past and future annual meetings, and

WHEREAS, It would be desirable to have more continuity among the present membership of the Council on Scientific Assembly than is presently provided by a one year term of office, now, therefore, be it

*Resolved*, That Chapter IV, Section 2 and Chapter IX, Section 3 By-Laws of the association be amended to read (new matter italicized):

*Chapter IV, Section 2. Section Officers. Each scientific section of the Association shall, as the last order of business during its regular meeting, elect a chairman who shall serve for a period of one year. A majority of votes cast shall be necessary to elect. Additionally, each section shall elect a secretary whose term of office shall be for a period of three years and so arranged that secretaries shall be elected by their respective sections at the same annual meeting as follows:*

1. *Sections on General Practice and EENT*
2. *Sections on Obstetrics and Gynecology and Preventive Medicine*
3. *Sections on Pediatrics, Surgery, and Medicine*

*Chapter IX, Section 3. Council on Scientific Assembly. The Council on Scientific Assembly shall be composed of the Secretary-Treasurer and the chairmen and Secretaries of the several scientific sections. The Secretary-Treasurer shall be chairman of the Council. Upon this Council shall devolve the duties and responsibilities of planning the annual session to include all scientific activity and the programming and scheduling of annual session events. The Council shall be empowered to appoint such committees for terms not to exceed one year as may be necessary to assist in the discharge of these duties.*

#### REPORT OF THE COUNCIL ON CONSTITUTION AND BY-LAWS

In Resolution No. 7, the Council on Scientific Assembly recommended certain changes in Chapter IV, Section 2 and Chapter IX, Section 3 of the By-Laws to assure that the association will enjoy a continuity of representation on the Council on Scientific Assembly.

At present, all members of the Council serve for one year only. The lack of continuity makes it difficult to organize the scientific assembly and the annual session.

Your council recommends that these amendments which would provide for election of a secretary of a section for a term of three years be adopted to accommodate these purposes.

The report of the council, acting as a reference committee, was adopted.

There were no reports of fraternal delegates. President Crawford presented the 1966 MSMA-Robins Award to Dr. J. T. Davis of Corinth. Dr. James L. Royals presented the Aesculapius Award and an honorarium of \$200 in behalf of the Council on Scientific Assembly to Dr. James D. Hardy of Jackson for having presented the scientific exhibit adjudged most outstanding. Mr. J. B. Williams of Parke, Davis and Company presented Dr. Royals with four framed paintings on the history of medicine for the association's headquarters building.

Mrs. J. Hurd Gaddy of Long Beach, 1965-66 president of the Woman's Auxiliary, and Mrs. J. Gordon Dees of Jackson, 1966-67 president of the Woman's Auxiliary, addressed the House of Delegates and were accorded a standing ovation.

#### OFFICIAL ATTENDANCE

The official attendance was announced as being 1,027 to include 597 physicians, 174 members of the Auxiliary, and 256 others.

#### REPORT OF THE REFERENCE COMMITTEE ON RULES AND ORDER OF BUSINESS

*Conduct of Business.* Your reference committee commends the Speaker and Vice Speaker for the outstanding manner in which they have conducted business before this House of Delegates. We believe that all members will wish to associate themselves in this commendation and an expression of appreciation to these officers.

*Resolution.* Your reference committee desires to offer the following resolution for consideration by this House of Delegates:

WHEREAS, The 98th Annual Session of the Mississippi State Medical Association has been conducted at Jackson, Mississippi, during the period May 9-12, 1966, and

WHEREAS, The annual session has been most profitable and enjoyable for all who have been in attendance, now, therefore, be it

*Resolved*, That expressions of deep appreciation are made to the officers, Trustees, and Council on Scientific Assembly for the stimulating and useful scientific program; to the management of all participating hotels, particularly the Hotel Heidelberg, the headquarters hotel; to the press, radio, and television; to the gracious ladies of the Auxiliary who always contribute so substantially to our meetings; to the technical exhibitors and their professional service representatives; to our scientific exhibitors, to our distinguished guests who participated in the Symposium on Nuclear Medicine, Drs. H. D. Bruner, George V. Taplin,



Paul V. Harper, Gould A. Andrews, and James L. Born, and the U. S. Atomic Energy Commission for making the symposium possible; and to all who shared in the responsibilities of planning, organizing, and conducting this great annual session.

The report of the reference committee was adopted.

#### REPORT OF THE ELECTION OF OFFICERS

President-elect: Temple Ainsworth, Jackson.

Vice Presidents: Arthur E. Brown, Columbus; George E. Gillespie, Jackson; Leo O. Stewart, Pascagoula.

Editor: W. Moncure Dabney, Crystal Springs.

Associate Editor: George H. Martin, Vicksburg.

Delegate to AMA: Howard A. Nelson, Greenwood.

Alternate Delegate to AMA: Stanley A. Hill, Corinth.

Board of Trustees: W. E. Moak, Richton, District 7; G. Swink Hicks, Natchez, District 8; C. D. Taylor, Jr., Pass Christian, District 9.

Council on Budget and Finance: George D. Purvis, Jackson.

Council on Medical Education: Dennis E. Ward, Corinth.

Council on Constitution and By-Laws: E. LeRoy Wilkins, Clarksdale.

Council on Legislation: A. T. Tatum, Petal, District 7; A. V. Beacham, Magnolia, District 8; Eldon L. Bolton, Biloxi, District 9.

Judicial Council: Paul B. Brumby, Lexington, District 4; William B. Wiener, Jackson, District

5; Omar Simmons, Newton, District 6.

Council on Medical Service: George F. Archer, Greenville, District 1; James O. Gilmore, Oxford, District 2; Jack M. Senter, Belmont, District 3.

Blue Cross-Blue Shield Directors: Lamar Arrington, Meridian; Andrew K. Martinolich, Jr., Bay St. Louis; S. H. McDonnial, Jr., Jackson; Walter H. Simmons, Jackson.

Fraternal Delegates: To Alabama, Jo Newell Robinson, Columbus; to Arkansas, G. Lacey Biles, Sumner; to Louisiana, Victor E. Landry, Lucedale; to Tennessee, Richard F. Riley, Meridian.

#### CONSTITUTION AND BY-LAWS

At the close of business, there were no pending amendments to the Constitution and By-Laws of the association.

#### CLOSING CEREMONIES

There being no further business, the Speaker returned the gavel to the President, Dr. Crawford. The Oath of Office was administered to Dr. James T. Thompson, the President-elect, by Dr. John B. Howell, Jr., Chairman of the Board of Trustees, after which Dr. Thompson addressed the House of Delegates.

Dr. James Grant Thompson presented the Thompson Memorial Past President's Pin to Dr. Crawford.

The House of Delegates was adjourned *sine die* at 4:33 o'clock in the afternoon, May 12, 1966.

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## ONE UP

An emotionally unstable patient took up golf on advice by his psychiatrist. One afternoon, they were playing together. The psychiatrist made a hole in one and began to jump for joy.

"What's the matter with you?" asked the patient calmly. "Isn't that the object of the game?"



# The President Speaking

## 'Unwed Mothers'

JAMES T. THOMPSON, M.D.

Moss Point, Mississippi

THE NATIONAL PROBLEM of illegitimacy, usually described in social and moral terms, has substantive medical implications which have long concerned physicians. At the recent Chicago annual convention, the AMA House of Delegates acted decisively to bring the full impact of medicine's resources and scientific knowledge into play against this shocking difficulty. A new program of research and facilities development will be spearheaded by the AMA Council on Medical Service.

In the past 20 years, the number of illegitimate births in the United States have doubled. Today, more than 250,000 children are born out of wedlock each year. Since every birth potentially involves seven persons—the infant, the mother, the father, and the parents of the mother and father—the lives of nearly 2 million Americans are thereby touched. Tragically, one out of three unwed mothers is a teenager.

It is reliably estimated that there are 3 million children under 18 years of age who are illegitimate. Of all children receiving long term foster home care, one out of four was born of an unwed mother.

Years ago, studies by the Mississippi State Medical Association showed certain characteristics of unwed mothers among which were their tendency to leave the home community, the attempt to conceal the pregnancy, and concern for their respective futures. Of least concern, the studies showed, was the future of the child.

The AMA program will initiate research on the underlying causes, prevention, and understanding of the factors leading to illegitimacy as it affects both the father and mother. Second, the program will seek the development of adequate facilities, where needed, for caring for unwed mothers. A third and new facet is counseling for the unwed father, and fourth, updated adoption procedures will be sought. The program is worthy and deserving of every physician's support. ★★★





# American Hospitals: A Matter of Abundance, A Question of More

## I

A WAG ONCE SAID that a hospital is like a huge department store where the customers are hauled in against their will, where the merchandise is purchased by accident, and where the entire establishment is run by a bunch of outsiders over whom the real management has little control. Wherever this quip reposes with reference to truth and fallacy, nobody denies that the American hospital is a miracle of versatility, capability, and specialized services. It is a more frequently abundant quantity in the United States than in any other nation, and its service potential is extended almost daily by the health care team.

Yet, the hospital is often the focus of debate, a characteristic of its changing personality, its need to adapt to new and different roles of service, and, most crucially, whether or not it is unto itself adequate for the task. The supply of hospital beds, present and future, is the subject of continuing studies, discussions, bond issues, and planning. It is the eternal question of more, especially as care financing broadens its base in government and voluntary coverage. It is a question of more as the population swells to 200 million, as the number of senior citizens grows, and as demand for hospital care increases among every segment of society.

Strangely enough, the role of the hospital is also shaped by the demands of the medical care-consuming public, just as it logically is shaped by the state of the science. The ability of the public to provide comprehensive inpatient care for itself is

largely a result of the emergence, development, and astonishing growth of voluntary prepayment and health insurance. Now this financing base has been broadened into the public sector where need can become whim. If this comes to pass, medical care for all may be a Pyrrhic victory, indeed.

## II

In August of 1946, the Congress enacted the Hospital Survey and Construction Act, popularly known as the Hill-Burton program. It was the first orderly appraisal of the nation's medical facilities, and it almost immediately resulted in the development of state plans for new construction, modernization, and refurbishing of hospital and public health resources. Over a score of years, the community-state-federal axis has expended billions in this program which has met more than 83 per cent of projected inpatient care facility needs.

In 1965, the state plans jointly reported the existence of nearly 767,000 beds in more than 6,900 nonfederal general and special hospitals. Of this total, more than 655,000 beds were deemed "acceptable" as to health and safety, and the bed-to-population ratio has increased in 20 years to about 3.5 beds per 1,000 population from the 1946 level of 2.8 beds. The 112,000 nonacceptable beds, about 15 per cent of the total, were so classified on the basis of fire and safety hazards.

Of the 54 states and territories, the latter being the District of Columbia, Puerto Rico, the Virgin Islands, and the Canal Zone, Mississippi ranks about midway with a ratio of acceptable general hospital beds of 3.26 per 1,000 citizens. Twen-

ty-seven jurisdictions have 3.5 to 4.0 beds per 1,000, but the U. S. Public Health Services points out that 12 of these are sparsely populated areas with the consequence of needing more beds per population unit.

Of Mississippi's 9,200 general medical and surgical beds in 135 nonfederal hospitals, about 7,400 are deemed acceptable. Under the state plan yardstick, about 2,200 new beds are needed. Using the same measure, the state is said to have met more than 77 per cent of its need. Nationally, the acceptable hospital bed ratio is 3.46 or a scant two-tenths of a bed per 1,000 population more than Mississippi's acute bed inventory. The national projected bed need is liberal, with U.S.P.H.S. calling for 4.17 beds per 1,000 population.

### III

In medical facilities for long term care, mental illness, tuberculosis, and in public health centers, diagnostic and treatment facilities, and rehabilitation institutions, the story is altogether different. The nation, according to the survey, has about half the long term care beds it really needs, and by the same measure, Mississippi has only about a sixth of what it should possess.

Essentially the same statistics apply to mental beds, and Mississippi has just over 55 per cent of its needs. Although tuberculosis is still a serious public health problem, the introduction of new therapy over the past 20 years has resulted in a dramatic diminution of need for inpatient facilities. Nationally, the United States has 97 per cent of the tuberculosis beds needed, and Mississippi is among the majority of jurisdictions having 100 per cent of its needs in this specific area fulfilled. So it is also with diagnostic and treatment centers.

Still to be felt, however, is the impact of relatively new government medical programs in addition to Medicare. Since 1963, a trio of significant enactments promise to exert an impact upon state plans. These are the Maternal and Child Health and Mental Retardation Planning Amendments (Public Law 88-156), the Mental Retardation Facilities and Community Mental Health Centers Construction Act (Public Law 88-164), and the Health Professions Educational Assistance Act (Public Law 88-129). Add to these the developing Regional Programs in Heart Disease, Cancer, and Stroke which will also provide for new and additional medical facilities, and it is readily appreciated that the hospital care situation is dynamic and fluid.

To the question, "What is the measure of enough in hospital and medical facility resources?" there is almost no pat answer. If it be the limit of medical science's capability, then the growth has only begun. If it be the goal of all possible comprehensive care and preventive health services for all citizens, as apparently contemplated in Title XIX of Public Law 89-97, then there is as much on the drawing board as there is in operation.

If it be the limit of the public treasury to finance these facilities, it must be remembered that the United States is rich by all standards of measure in the world, spending more for tobacco and alcohol than it does for health services. In the final analysis, American medical facilities are a matter of abundance and a question of more.

What is important is current usefulness, the maximum possible preservation of providing health care services from the community level, maximum participation and control within the private sector, local determination, and local administration of those programs of care underwritten by any level of government. Medicare is a classic example in which almost none of these vital prerequisites is present, and it consequently promises to deliver



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**Administration and Dosage:** One or two chewable tablets 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation. The recommended dosage should not be exceeded.

**Side effects:** Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is a concomitant administration of a coronary vasodilator.

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less for the dollar under the most vexatious and trying of circumstances.

While the public, aided by government beneficence, can generally demand and get what it wants in health care facilities, only physicians are fully competent to *judge* medical need. The matter of abundance is an accomplished fact, but the question of more is largely a medical decision. Let's keep it that way.—R.B.K.

## The Changing Face of Health Insurance

During 15 years of debate over what finally took the statutory shape of Medicare, opponents of the legislation frequently warned of its inevitable affect upon health insurance and voluntary prepayment. However lightly this viewpoint was taken, the position is being vindicated by an astonishingly rapid series of events. In a nutshell, the private insurance industry and voluntary prepayment plans are getting out of the over 65 field like a rabbit four lengths ahead of the hounds.

The fundamental basis for this profound change is the breadth and depth of Medicare in its near-universal encompassment of the 19 million plus Americans over 65 years of age. Obviously, no insurance company or Blue plan can afford to duplicate Medicare benefits on a risk base which has been shrunk to a fraction of its former spread. Additionally, most state insurance commissions are ruling against such a duplication of benefits.

There will, of course, be exceptions during the early phases of Medicare. Here in Mississippi, the Blue plan is offering those over 65 the option of continuing their pre-Medicare coverage because of uncertainty in the hospital situation. Individual, noncancellable contracts are being honored by the health insurance industry, but at best, this is a short term commitment, considering the age level of the assureds.

William S. Thomas, vice president of the Metropolitan Life Insurance Co., one of the titan organizations in the health insurance picture, believes that Medicare will exert an impact in three distinctly identifiable areas of group health insurance.

First, says Mr. Thomas, it will affect group plans in actual operation for retirees, for employees who are over age 65, and in group con-

versions after age 65. Second, Medicare will force a closer working relationship between the insurance industry and hospitals with reference to Part 1-A. For Part 1-B, he continues, the industry faces the challenge of altering substantially its existing benefit structures as Medicare fosters the development of its "reasonable fee" concept.

Third, Medicare will exert a decided effect on plan design for benefits covering individuals under age 65. Many new insurance contracts, including those of the Blues, will embrace the "carve out" concept where payment is made only for those services which Medicare will not provide.

A major challenge faces both insurance and voluntary prepayment as to whether Medicare benefits will ultimately be considered "payable" or "available" in tailoring their respective programs for senior citizens. This is to say that a decision must be made whether to take into account all possible Medicare benefits whether the individual has signed up for Medicare or not. Admittedly, only a small segment of the over 65 population will be affected, but the spill-over of the concept could be significant to other groups.

A little-known debate within the insurance industry is quietly being conducted, and it relates both to long-standing Blue Cross practices as well as to Medicare. Some health insurance executives feel that an insurance company should have the right, if it so desires, to reimburse a hospital on a *per diem* cost basis rather than on a flat benefit rate. This, in itself, could become a major issue in the voluntary insurance field.

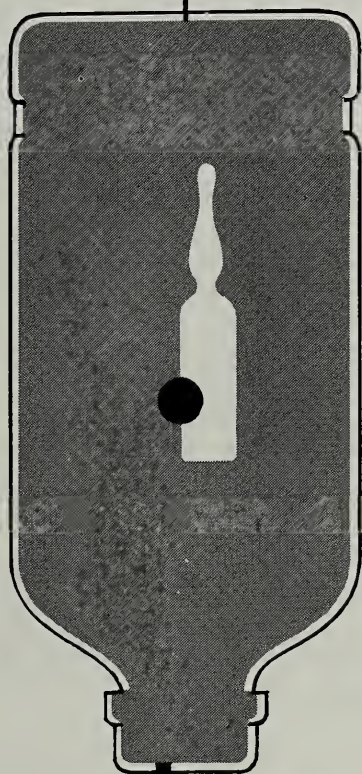
Let it be earnestly hoped that Medicare will never supplant voluntarism, but the direction is more than a rhetorical warning. For this and other reasons, the changing face of health insurance is a countenance which everyone must watch.—R.B.K.

## *Life Magazine:* Color It Yellow

*Life Magazine*, best known for bewailing the tyranny of Southern barbarians and praising the foreign policy espoused by LBJ, has now characterized American physicians as greedy merchants busily engaged in peddling pills at huge profits. In its June 24 issue, *Life's* cover, well littered with capsules and tablets in full color, headlined "Doctors and the Rx Scandal" with a blazing subhead proclaiming "how some M.D.'s short-cut ethics and profit from their own prescriptions."



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When iron deficient patients are intolerant  
of oral iron...or orally administered iron  
proves ineffective or impractical...or if  
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**IN BRIEF: ACTION AND USES:** A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

**COMPOSITION:** Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

**ADMINISTRATION AND DOSAGE:** Dosage, based upon body weight and Gm. Hb/100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. Initial test doses are advisable. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

**SIDE EFFECTS:** Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylatoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache and fever have occasionally been reported.

**PRECAUTIONS:** If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

**CONTRAINDICATIONS:** Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only it is contraindicated in other anemias.

**CARCINOGENICITY POTENTIAL:** Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

**SUPPLIED:** 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

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Nor did the *Life's* editors overlook the opportunity to put in a plug for the Hart bill, S. 2568, which seeks to "outlaw" profit by physicians in dispensing drugs and devices. All in all, it was a most typical product of *Time-Life* journalism.

The article laid heavily into the unwholesome practice of drug repackaging houses, something frowned upon by AMA and the several state medical associations for years. Picking upon a few isolated instances of questionable dispensing practices, the story made it seem as if the profession of pharmacy were starving amid cobweb-covered shelves of unsold prescription drugs. Most of the information in the article was four to six years old, but the editors made it sound as if it were hot off the newswire.

This story is a classic example of the inclination among many slick magazines to deify the individual physician and to consign the profession to the hottest brimstone in the underworld. It does a distinct disservice to that vast majority—approaching unanimity—of American physicians who practice their profession with integrity, honor, and skill. It is not merely regrettable but deplorable as well.

Happily, not too many Southerners will fret about this lurid sensationalism published in four colors: They already know *Life Magazine* for what it is and evaluate its contents, on the infrequent occasions they read it, accordingly.—R.B.K.

## Medical Manpower: Shift From Private Practice?

Scarcely a major medical meeting comes and goes without a formal utterance on health manpower, and the 115th Annual Convention of AMA was no exception. Only recently, the *JOURNAL* addressed itself editorially to the problem of securing adequate numbers of professional and licensed practical nurses for extended care facilities.

The outlook for physician supply is encouraging and optimistic as the medical schools increase both their numbers and training capabilities (Milestone 300,000: Medical Progress and Doctors for All, J.M.S.M.A. VII:287-292 (June) 1966). So it is not so much a matter of a growing physician population as it is one of what the doctor of tomorrow will be doing.

All too often, the total physician manpower pool is related to a population measure. The resulting numeric notation usually takes the form of

a ratio, an all but useless yardstick in the light of fast transportation, population mobility, and instant communications. But there is at least one matter for concern, and this is the private practice pool.

From 1950 through 1963, the percentage of American physicians in private practice declined to 64 per cent from 72 per cent. The fact that the private practice pool actually grew to 175,000 from the 1950 level of 159,000 is of little comfort in view of the 11 per cent decrease among those actually so engaged. Moreover, the percentage of physicians in a training status is growing by leaps and bounds. While these trainees do contribute to medical care, it should be kept in mind that this care is generally limited to patients in hospitals with training programs or about one fifth of all hospitalized patients in the nation.

The numbers and percentages of physicians in the federal medical services have steadily increased as have the numbers of employed physicians in hospitals. The new medical schools, the Regional Programs in Heart Disease, Cancer, and Stroke, and the coming mental health centers will make strong demands on the physician manpower pool.

These trends must be regarded seriously, and while American medicine fully intends to meet all legitimate demands for medical service, the interest of the private care-consuming public must not be neglected.—R.B.K.



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SAVES  
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WASTES  
WATER**



METAHYDRIN (trichlormethiazide) is prescribed by physicians because it not only approximates the diuretic efficacy of parenteral meralluride injection . . . but, *it is the least expensive of all "brand-name" thiazides.* Therefore, when you prescribe METAHYDRIN (trichlormethiazide) your patients receive the thiazide diuretic that removes a little more salt and water than earlier thiazides, with relatively less loss of potassium . . . and, it's therapy they can more easily afford . . . *only pennies a day.*

## **METAHYDRIN<sup>®</sup>** (trichlormethiazide) oral diuretic

**Dosage:** One 2 or 4 mg. tablet once or twice daily.

**Precautions:** As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

**Side Effects:** Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have occasionally been noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by the administration of thiazides.

**Contraindications:** Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

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## PERSONALS

JAMES E. BOOTH has returned to Eupora where he will practice general surgery. He has completed a four year residency at the University Medical Center.

EARL W. GREEN of Hattiesburg has been appointed a member of the Mississippi Commission on Hospital Care by Governor Johnson. The commission supervises the Hill-Burton program and acts as the licensure agency for hospitals in the state.

MAURY H. MCRAE of Corinth was honored recently upon his 50th anniversary in the practice of medicine. WILLIAM E. LOTTERHOS of Jackson represented the state medical association and inducted the honoree into the Fifty Year Club.

ROBERT D. MCBROOM, III, has resumed his practice at Centreville as a member of the Field Clinic. He limits his practice to internal medicine and gastroenterology. Also associated with the clinic as a visiting member is DONALD F. BAZZARA of Natchez.

HOWARD A. NELSON of Greenwood, a past president of the state medical association and president-elect of the University of Mississippi Alumni Association, was a featured speaker at the recent meeting of the Sunflower County Ole Miss Alumni Association. Also appearing on the program was Ole Miss Coach John Vaught.

HARRY J. SCHMIDT, JR., has announced the opening of his office for the practice of internal medicine at 137 Lameuse St. in Biloxi. He received his premedical education at the University of Notre Dame and his M.D. degree from the Tulane University School of Medicine. He received his postgraduate training at Touro Infirmary and Charity Hospital at New Orleans.

FERD M. SHELL of Laurel has been elected president of a corporation which will construct several convalescent hospitals and nursing homes. The first project is being built on 25 acres of city-owned property which has been leased. Other corporation officers are JAMES B. DONALDSON, vice president; RAY F. MOTLEY, secretary; WILLIAM W. MAYERS, treasurer; and C. R. JENKINS, member of the executive committee.

SAMUEL J. SIMMONS, III, has announced the opening of his offices on 14th St. Extension at Pascagoula. He will limit his practice to internal medicine.

JAMES T. THOMPSON, president of the Mississippi State Medical Association, has been named chairman of the United Committee on Schools of Moss Point. Chief task of the committee is to secure favorable support by the electorate for an upcoming \$2.3 million school bond issue.

IRVIN B. TRAPP of Port Gibson has retired as director of the Claiborne County Health Department after 18 years of service. He is a graduate of the University of Mississippi and the University of Oklahoma School of Medicine. He plans to continue to make Port Gibson his home.

ELBERT A. WHITE, III, has announced the opening of his office for the practice of pediatrics at 705 Shiloh Road in Corinth. A native of that city, he received both his premedical and medical education at Vanderbilt University. He is a Fellow of the American Academy of Pediatrics and a diplomate of the American Board of Pediatrics.

REGINALD P. WHITE of Meridian, director of the East Mississippi State Hospital, has been certified as a mental hospital administrator by the American Psychiatric Association and elevated to Fellowship in the APA. He is also a diplomate of the American Board of Psychiatry.

LOUIE F. WILKINS, JR., of Brookhaven has occupied his new clinic building on Highway 51 at Halbert Heights Intersection.



## NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

DORE, DONALD EDWARD, JR., Pascagoula. Born New Orleans, La., April 28, 1930; M.D., Louisiana State University School of Medicine, New Orleans, 1956; interned Charity Hospital, New Orleans, La., one year; pathology residency, Charity Hospital, New Orleans, La., four years; member, College of American Pathologists, the American Society of Clinical Pathologists, and the Society of Nuclear Medicine; diplomate of the American Board of Pathology; elected May 4, 1966, by Coast Counties Medical Society.



In colicky infants Pediatric Piptal with Phenobarbital slows down spasm, diminishes pain and crying and improves feeding patterns. It permits sleep and rest for patient and family. The less than hypnotic amount of phenobarbital in the recommended dose affords a mild, calming action and enhances the antispasmodic action of Piptal (pipenzolate bromide). The latter drug, as reported in the medical literature, has a favorable ratio of effectiveness to side-effects which is unusual in anticholinergics and thus is particularly appropriate to pediatric use.

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QUIETS PARENTS  
QUIETS **COLIC**

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Pleasant-tasting Pediatric Piptal with Phenobarbital is miscible in milk, formulas and fruit juices, and may also be given by dropper directly on the infant's tongue. Dosage is 0.5 cc. 15 minutes before feeding; in severe cases, 1.0 cc. four times daily. High doses may occasionally cause constipation with tenesmus and, rarely, flushing without fever. It is contraindicated in bowel obstruction or sensitivity to phenobarbital or anticholinergics. Available in 30 cc. dropper bottles, droppers calibrated to deliver 0.5 cc.

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## NEW MEMBERS / Continued

MAGGIO, HENRY ANTHONY, Bay St. Louis. Born New Orleans, La., Nov. 20, 1935; M.D., Louisiana State University School of Medicine, New Orleans, 1961; interned Brooke General Hospital, Ft. Sam Houston, Tex., one year; member, American Academy of General Practice; elected Nov. 10, 1965, by Coast Counties Medical Society.

ROWLETT, GEORGE SAMUEL, JR., Vicksburg. Born Richmond, Va., Feb. 26, 1918; M.D., Medical College of Virginia, Richmond, 1943; interned Charity Hospital, Shreveport, La.; residencies, Charity Hospital, Shreveport, La., Methodist Hospital, Dallas, Tex., V. A. Hospital, New Orleans, La., and Touro Infirmary, New Orleans, La.; member, Southern Medical Association; elected Oct. 12, 1965, by West Mississippi Medical Society.

YERGER, LOUIS BUFORD, JR., Jackson. Born Jackson, Miss., Dec. 8, 1934; M.D., University of Mississippi School of Medicine, Jackson, 1960; interned Colorado General Hospital, Denver, one year; residencies, Mississippi Baptist Hospital and the University of Mississippi School of Medicine, Jackson; elected May 3, 1966, by Central Medical Society.



## DEATHS

CLEVELAND, THOMAS GROVER, Meridian. M.D., Tulane University School of Medicine, New Orleans, La., 1913; interned St. Louis City Hospital, Mo.; past president of the East Mississippi Medical Society; member of the Southern Medical Association; Emeritus member of MSMA and member of the MSMA Fifty Year Club; died June 17, 1966, aged 80.

LOCKARD, JAMES NICHOLAS, Pascagoula. M.D., Tulane University School of Medicine, New Orleans, La., 1923; interned Touro Infirmary, New Orleans, La.; surgical residency, Touro Infirmary, New Orleans, La., two years; member, Southeastern Surgical Congress; past president of the Coast Counties Medical Society and the Gulf Coast Clinical Society; died June 16, 1966, aged 67.

OLIVER, THOMAS CALVIN, Leland. M.D., Mississippi Medical College, Meridian, 1912; member, American Academy of General Practice and the American Academy of Physicians and Surgeons; member of the MSMA Fifty Year Club; died May 22, 1966, aged 78.

## State Morbidity Reported Through June 24

The Mississippi State Board of Health reports the following occurrence of morbidity for 1966 through the 25th week of the year, ending June 24. Case totals are shown opposite the disease condition.

Tuberculosis, pul. ....	438
Tuberculosis, O.F. ....	23
Dysentary, bac. ....	25
Salmonella inf. ....	13
Diphtheria ....	2
Meningococcal inf. ....	14
Meningitis, O.F. ....	31
Mononucleosis, inf. ....	19
Myelitis ....	1
Encephalitis, inf. ....	6
Hepatitis, inf. ....	156
Meningococcemia ....	4
Helminthic infections	
Hookworm ....	433
Ascariasis ....	199
Strongyloides ....	28
Taeniasis ....	19
Streptococcus infections	
Strep throat ....	2,262
Scarlet fever ....	38
Mumps ....	242
Measles ....	908
Influenza ....	805
Chickenpox ....	213
Syphilis	
Early ....	359
Late ....	76
Gonorrhea ....	2,222
Rabies in animals	
Bats ....	3





### Book Reviews

**Disorders of Carbohydrate Metabolism in Infancy.** By Marvin Cornblatt, Professor of Pediatrics, University of Illinois College of Medicine; and Robert Schwartz, M.D., Associate Professor of Pediatrics, Western Reserve School of Medicine. 297 pages with illustrations. Philadelphia: W. B. Saunders Company, 1966. \$8.50.

The purpose of this book as stated in the preface is to present the authors' concept of the normal and abnormal physiology of carbohydrate metabolism in the fetus, the pregnant mother, the neonate and the infant. The general practitioner handling the mother and the infant with the diabetic problem should welcome the discussion of both of these problems in one volume.

The infant of the diabetic mother does present a situation requiring definite knowledge of the normal blood sugar level and at what level treatment should be given to the hypoglycemic infant, the exact amount of glucagon I.M. or, in the more severe cases, glucose I.V. to give the infant, the frequency with which blood sugars should be evaluated, and specific follow-up instructions. This knowledge is used infrequently in the practice of general pediatrics, but I know of no other volume which would give such precise up-to-date information at the time it is needed.

The authors recommend to the obstetrician that the insulin-dependent diabetic be hospitalized prior to delivery and be brought to a stable metabolic state. Induction of labor or cesarean section should be accomplished with pregnancy interrupted at 35-57 weeks gestation. This tends to minimize excessive weight gain of the infant.

Subsequent chapters deal with the rare hereditary metabolic disorders of glycogen metabolism, galactose and fructose intolerance.

The appendix serves as useful research information, by giving tables of carbohydrate content of foods and diets for disorders of carbohydrate metabolism.

With the brief review of existing literature and an understandable summary of the rather involved chemistry of carbohydrate metabolism given at the beginning of each chapter, I feel the authors have presented only the salient useful informa-

tion on this subject. Every pediatrician and obstetrician should have a copy for the office bookshelf.

MARY J. WARD, M.D.

**Preventive Medicine.** Edited by Herman E. Hilleboe, M.D., Professor of Public Health Practice, Columbia University, and Granville W. Larimore, M.D., First Deputy Commissioner of Health, State of New York. 509 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. \$12.00.

This is the second edition of a book that was originally published in 1959. Drs. Hilleboe and Larimore served as co-editors of the book as well as writing, either alone or in conjunction with others, several chapters. Most of the contributors are public administrators, many associated with the New York State Department of Health. However, this book is not intended for public health physicians and administrators alone. Drs. Hilleboe and Larimore state that its purpose is "to help medical students, physicians, and others in the field of health understand better how to practice preventive medicine."

For purposes of discussion, preventive medicine is divided into two major segments—one dealing with the prevention of occurrence of disease, and the other dealing with the prevention of progression of disease when prevention of occurrence is not possible. Under prevention of occurrence, control of environmental factors, prophylactic measures against disease, provision of proper and adequate nutrition, and elimination of predisease conditions are discussed.

Under prevention of progression, the periodic health inventory, the early detection of disease, follow-up of screening and diagnostic examinations, and rehabilitation of the patient are discussed. The authors also consider various supporting services, such as health education, social work, public health nursing, vital statistics and other allied services that can be of aid to the physician in the practice of preventive medicine.

This book would be useful to the general practitioner, and the internist, as well as the physician working exclusively in public health and preventive medicine.

JOSEPH T. HAMRICK, M.D.



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# Dr. Ricks Is Named to Board of Health; Dr. McKinnon Is Elected President

A past president of the Mississippi State Medical Association has been appointed for a six year term on the State Board of Health by Governor Paul B. Johnson, and an incumbent member has been reappointed and elected president. Named to the board was Dr. H. C. Ricks, Sr., of Jackson, and Dr. Joseph G. McKinnon of Hattiesburg was

reappointed. Both were nominated to the Governor by the House of Delegates.

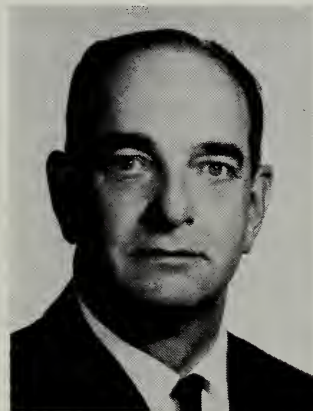
At the summer meeting of the State Board of Health, Dr. McKinnon was elected president. He succeeds the late Dr. Samuel E. Field, Sr., of Centerville who died April 7. Dr. McKinnon was first appointed to the board in 1957 to serve the unexpired term of

the Division of Epidemiology and Communicable Disease Control of the Mississippi State Board of Health. After serving as director of county health work, he was appointed director of laboratories, a capacity in which he served until his retirement in 1962.

Dr. Ricks holds the M.P.H. degree from the Johns Hopkins University School of Medicine. He is Professor Emeritus of Preventive Medicine of the University of Mississippi School of Medicine and recipient of

the Distinguished Service Awards of The American Legion of Mississippi, the Mississippi Association of Pathologists, and the Mississippi Society of Medical Technologists.

Active in medical organization, Dr. Ricks served as a member of the state medical association's Board of Trustees



*Dr. McKinnon*

from 1944 until 1956 and was secretary of the governing body. He is a past secretary and past president of the Central Medical Society. During 1956-57, he was president of the state medical association.

The newly elected president of the State Board of Health, Dr. McKinnon, attended Southwestern University and received his M.D. degree from the University of Tennessee College of Medicine in 1935. His postgraduate training was received at Columbus, Ohio, and Vicksburg with residencies in general surgery. He is a Fellow of the American College of Surgeons.

During 1941-46, Dr. McKinnon served as a medical officer in the U. S. Navy, rising to the



*Dr. Ricks*

his father, the late Dr. H. L. McKinnon, who had resigned.

Both appointees were nominated by the House of Delegates at the 97th Annual Session in 1965. Dr. McKinnon represents public health district 6, and Dr. Ricks, district 8. There is currently a vacancy on the State Board of Health for a physician member from district 7.

Dr. Ricks received his M.D. degree from Emory University School of Medicine in 1916 and his postgraduate training in Arkansas and Texas. During World War I, he served in France as a captain in the medical corps and was cited twice for gallantry in action. He holds the Silver Star.

Following the war, Dr. Ricks engaged in general practice in Oklahoma, later becoming director of laboratories for the Oklahoma State Board of Health. In 1928, he was appointed director of

grade of commander. In 1960, he was elected president of the American Cancer Society, Mississippi Division, and continues to hold high posts in that organization. He is a past president of the Hattiesburg Clinical Society, and he has served as president of the Mississippi Chapter, American College of Surgeons.

Initially appointed to serve the unexpired term of his father as a member of the State Board of Health, Dr. McKinnon has received appointments from two Mississippi governors for regular terms. He is active in the state medical association and is a member of the House of Delegates.

At present, a vacancy exists in public health district 7, the post formerly held by Dr. Field. At the 97th Annual Session in 1965, the House of Delegates nominated for the post Drs. Jim C. Barnett, Jr., of Brookhaven, Leo J. Scanlon of Natchez, and Dr. Field to Governor Johnson. The term extends from Jan. 1, 1966, until Dec. 31, 1971. Following Dr. Field's death on April 7, the association nominated Dr. Everett Crawford of Tylertown so as to provide three nominees, as required by law.

Other members of the State Board of Health are Dr. A. L. Gray of Jackson, executive officer and member-at-large; Dr. Estes M. Blackburn of Jackson, the dental member, and Drs. DeWitt Hamrick of Corinth, Julian C. Bramlett of Oxford, George F. Archer of Greenville, Joseph L. Guyton of Pontotoc, and Lamar Arrington of Meridian, all physicians.

An additional member, Eric Muir of Cleveland, an optometrist, was appointed by the Governor under authority for such a post created by the 1966 regular session of the Legislature.

## Insurance, Blue Plans Pay \$9 Billion

More than 1,900 health insuring organizations paid out \$9.6 billion in benefits in 1965, the Health Insurance Council reported today in its 20th annual survey of the extent of health insurance in the United States.

The HIC's survey, which soon will be published in booklet form, stated that at the end of 1965 over 156 million persons had hospital expense protection, and that of these, 93.5 per cent had surgical expense coverage, and 72.3 per cent had regular medical expense coverage.

The Council's survey was based on data provided by 972 insurance companies, government

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**Contraindications:** In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions.

**Precautions:** Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

**Dextro-amphetamine sulfate:** Use by unstable individuals may result in psychological dependence.

**Meprobamate:** Careful supervision of dose and amounts prescribed is advised; especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of pre-existing symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dose—operation of motor vehicles, machinery or other activity requiring alertness should be avoided. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side Effects:** Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

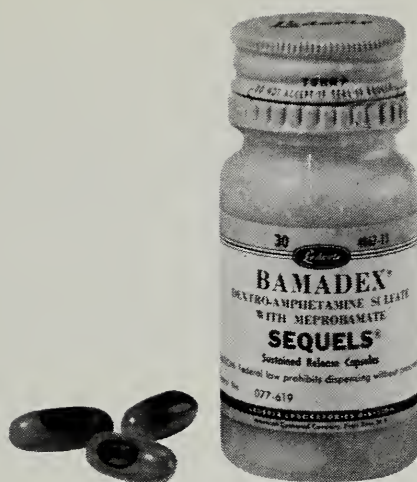
**Dextro-amphetamine sulfate:** Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

**Meprobamate:** Drowsiness may occur and can be associated with ataxia, the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor, and respiratory collapse.





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By providing combined anorexigenic-tranquilizing action, BAMADEX SEQUELS Capsules help your nonshrinking patients to establish new patterns of eating less. The amphetamine component suppresses the appetite, while the meprobamate helps allay nervousness and tension. And for most patients, the *sustained* release of the active ingredients makes possible convenient one-capsule-a-day dosage.

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## ORGANIZATION / Continued

agencies, and 150 Blue Cross, Blue Shield, and medical society plans.

The 156,047,000 persons with hospital insurance represented 80.9 per cent of the civilian population. The total was 4.9 million persons higher than in 1964 when 151,123,000 were similarly protected.

Benefit payments made in 1965 by all insuring organizations for hospital, surgical, and medical care totaled \$8.6 billion, or \$886 million over the 1964 total, the Council reported. In addition, persons with disability income insurance provided by insurance companies, received \$1.0 billion, making the grand total \$9,617,000,000, a record high, and a 10.6 per cent increase over the 1964 total of \$8.7 billion.

Of the grand total, insurance companies in 1965 paid out benefits of \$5.2 billion.

## Pediatricians Needed in Public Care

The individual pediatrician today must become actively involved in the implementation and development of government-sponsored health programs to insure that health services provided for under these programs are "adequately and satisfactorily covered."

Dr. E. H. Christopherson, executive director of the American Academy of Pediatrics, called on pediatricians to meet this need in an address before the American Medical Association's Section on Pediatrics during the AMA's annual meeting in Chicago.

Dr. Christopherson was honored by the AMA as the recipient of the 1966 Abraham Jacobi Award for his "lifelong devotion to the art and science of child care."

"To date," Dr. Christopherson emphasized, "government programs have been designed to enable state and local communities to plan for their specific needs. It therefore becomes most important that pediatricians take part at the local level to help design these programs in the interest of obtaining satisfactory health care," he emphasized.

"If physicians do not accept this responsibility, these programs will be implemented without the necessary medical consultation and guidance," he warned.

Dr. Christopherson went on to emphasize the need today for a "substantial and immediate in-

crease" in the number of pediatricians to care for the health needs of the continually increasing child population in America.

"It is estimated that by 1980 there will be approximately 76 million children in the United States," he pointed out.

Dr. Christopherson further indicated that although the ratio of pediatricians to child population under 15 years has increased considerably since 1940, the ratio of pediatricians and general practitioners combined has decreased from 352 per 100,000 in 1940, to 151 per 100,000 in recent years.

He emphasized that a need therefore exists to train additional numbers of pediatricians, or develop new ways "to provide health services to the great number of children who will make up our population in the next decade or so."

## Maryland Governor Vetos Optometry Bill

Governor J. Millard Tawes of Maryland has vetoed a bill passed by the legislature intended to correct alleged discrimination against optometrists in their dealing with state agencies. The measure, S. 325, would have required "all state and local agencies to accept, recognize, and honor any statement, report, or service" rendered by an optometrist.

A similar measure was enacted by the recent 1966 Regular Session of the Mississippi Legislature and signed into law by Governor Paul B. Johnson.

In his veto message, Governor Tawes said that "my veto is based on the provision which directs all state and local agencies to accept, recognize, and honor any statement, report, or service rendered by an optometrist.

"The provision in no way states or insures the quality or content of such statements, reports, or services," the Governor continued, "and I would believe this to limit state and local officials as well as agencies in the administration of certain programs since the law would give them no latitude for the exercise of best judgment."

Governor Tawes said that while he believed that patients should have free choice of practitioner, S. 325 "goes far beyond what the individual patient can decide."

He said that the Maryland State Health Department had urged him to veto the bill. The legislation is typical of that being lobbied by optometrists in many state legislatures.



## Blue Plan Honors Old 'Over 65' Contracts

Ninety per cent of Mississippi Blue Cross-Blue Shield enrollees over 65 have elected to retain their old contracts because of the uncertainty about receiving Medicare benefits in state hospitals. Less than half of the state's 125 acute medical and surgical facilities have been certified as care providers.

Of 50,000 over 65 subscribers with Blue plan coverage on July 1, only 5,000 had converted to the new "Senior Med," a contract which pays Medicare deductibles and coinsurance costs.

Almost simultaneously with the implementation of Medicare, the Mississippi plan announced that "Senior Med" purchasers had the option of re-converting to their old contracts because of the uncertain hospital situation. Plan officials added, however, that payments duplicating Medicare benefits could not be made, and it is anticipated that over 65 contracts will be so endorsed.

Medicare beneficiaries may also retain catastrophic riders carried under old contracts. These extra payment benefits included coverage for cancer and the special Master Health Endorsement. The extra coverage may be continued at present rates, plan officials told the state medical association.

Re-conversions to the old contracts, where requested by over 65 enrollees, are being made Aug. 1 and Aug. 15, according to the billing cycle. Those electing to keep the "Senior Med" were encouraged to pay billing statements promptly to avoid interruption of the coverage.

## ACP Fellowship Given Three State Doctors

Three Mississippi physicians were honored during the recent 47th Annual Session of the American College of Physicians at New York. Inducted into fellowship were Drs. Fred Allison, Jr., and Lidio O. Mora of Jackson and Thurman T. Justice, Jr., of Gulfport.

The 13,000 member specialty society represents internal medicine and related fields. Fellowship is bestowed only upon candidates who have successfully fulfilled postgraduate education requirements and who have demonstrated proficiency in their particular field of professional interest.

Site of the annual session was the New York Hilton. The fellowship induction was carried out during a colorful convocation when annual awards were presented.

## Mississippian Wins Kimble Technology Award

A Mississippi medical technologist has been named winner of the 1966 Kimble Medical Technology Award. James W. Gorman of Jackson and formerly of the Mississippi State Sanatorium received a silver plaque and an honorarium of \$500 for his work in devising laboratory techniques for diagnosis of histoplasmosis and blastomycosis.

Called the Sabhi-blood medium, the method employs a combination of two previously used

media enriched with blood and an antibiotic. The method is said to improve the fungus recovery rate by approximately 900 per cent in laboratory tests.

In a series of 2,500 tests, Gorman found 36 positives using the Sabhi-blood medium. It is estimated that only three positives would have been found using other media.



Mr. Gorman

The full report of the work will be published in the *American Journal of Medical Technology*.

Gorman received his B.S. degree from Delta State College at Cleveland and his technical training at Mercy Hospital-Street Memorial in Vicksburg. He was employed at that institution from 1952 to 1955 as a blood bank supervisor and instructor in medical technology. From 1955 until 1966, he was chief medical technologist at the Mississippi State Sanatorium where he did his work on the Sabhi-blood medium test.

He is now medical technologist in charge of the cardiac catheterization laboratory at the Veterans Administration Center at Jackson. Gorman is a native Mississippian, born at Greenville, a member of the American Society of Medical Technologists, and is listed in the Registry of Medical Technologists of the American Society of Clinical Pathologists.

The Kimble Award was presented to Gorman recently at Los Angeles during the annual convention of the American Society of Medical Technologists.

Anatomy of  
Low Back Pain #1



**the sedentary life  
is often the seat of  
low back pain**

The human spine is not engineered for prolonged sitting at desks, pianos, typewriters and drafting boards. The stresses set up by the heavy, forward-tilted head and trunk, balanced precariously on an insufficient base, result in strain of the dorsal musculature, particularly at the low lumbar level.

*The unusual muscle-relaxant and anesthetic properties of 'Soma' make it especially useful in the treatment of low back sprains and strains. 'Soma' is widely prescribed ☐ to relieve pain ☐ to relax muscles ☐ to restore mobility.*

**Indications:** 'Soma' is useful for management of muscle spasm, pain, and stiffness in a variety of inflammatory, traumatic, and degenerative musculoskeletal conditions. It also may act to normalize motor activity in certain neurologic disturbances.

**Contraindications:** Allergic or idiosyncratic reactions to carisoprodol.

**Precautions:** 'Soma', like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate.

**Side Effects:** The only side effect reported with any frequency is sleepiness, usually on higher than recommended doses. An occasional patient may not tolerate carisoprodol because of an individual reaction, such as a sensation of weakness. Other rarely observed reactions have included dizziness, ataxia, tremor, agitation, irritability, headache, increase in eosinophil count, flushing of face, and gastrointestinal symptoms.

One instance each of pancytopenia and leukopenia, occurring when carisoprodol was administered with other drugs, has been reported, as has an instance of fixed drug eruption with carisoprodol and subsequent cross reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. In cases of allergic or hypersensitivity reaction to carisoprodol should be discontinued and appropriate therapy initiated. Suicidal attempts may produce coma and/or mild shock and respiratory depression.

**Dosage:** Usual adult dose is one 350 mg. tablet three times daily and at bedtime.

**Supplied:** Two Strengths: 350 mg. white tablets and 250 mg. orange, two-piece capsules.

*Before prescribing, consult package circular.*

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of low back  
sprains and strains**

**SOMA**  
(CARISOPRODOL)



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## UMC Is Awarded Wyeth Research Grant



*Receiving an unrestricted grant for medical research in behalf of the University Medical Center is Dr. F. J. Moore, center, professor and chairman of the department of psychiatry. Making the presentation for Wyeth Laboratories is its director of professional services, Dr. Robert S. Warner, left, as James I. Pearce, Jr., right, the local area Wyeth associate, assists.*

## M.D.'s Set European 'People-to-People' Tour

A "Doctor-to-Doctor" travel program emphasizing medical activities in the Soviet Union and five other eastern and western European countries will be conducted in September and October by medical leaders in the midwest. The group will participate in the goodwill mission as a People-to-People international travel activity.

Dr. Kenneth C. Hollweg of Kansas City will lead the delegation for visits with counterparts and government officials in Belgium, Sweden, the Soviet Union, Poland, Czechoslovakia and Germany.

Medical doctors may still join the group and may confirm reservations for their wives. They will have opportunities to meet professional counterparts face-to-face in other countries. The tour is planned to stimulate an exchange of ideas, information, concerns and common interests.

"This tour is not devoted to tourism. It is designed to improve understanding and friendship between men and women of different cultural backgrounds but similar interests," stated Dr. Hollweg.

People-to-People is a nonprofit, nonpolitical effort of private citizens to promote international understanding. The program was launched by President Dwight D. Eisenhower in the wake of the second world war to provide opportunities for the individual and the entire American family to communicate with counterparts around the world in the spirit of friendly interchange.

The American doctors will leave Kennedy International airport in New York City on September 27 and will return on October 18.

Details concerning the goodwill delegation may be obtained from Dr. Hollweg at 4320 Wornall Road, Kansas City, Missouri 64111.

## Southwest Is Renamed Blood Services

One of the better known service organizations in the medical field has changed its name to Blood Services. It was formerly designated as Southwest Blood Banks, Inc. In Mississippi, Dr. C. B. Mitchell, Jr., of Meridian is medical director.

"The name change was made," according to W. Quinn Jordan, executive director of the organization, "because of the many diversified fields of blood banking we have moved into in the last few years. The fields of blood banking, blood derivatives, blood storage, blood research and blood insurance are all areas within which our organization works," Jordan said.

Blood Services was formed in Phoenix in 1943, under the auspices of the Maricopa County Medical Society, and since beginning with one bank, the corporation has grown to become the largest medically sponsored, not-for-profit, blood banking system in the United States. The group operates blood banking services in California, Nevada, New Mexico, Texas, Louisiana, Mississippi, Arkansas, Wyoming, Montana, North Dakota, South Dakota, and in Arizona, where the parent bank is located at 1211 West Washington in Phoenix.

"In keeping with the modern trend of an organization's name aptly portraying its goals," said Jordan, "the physicians who comprise our board of trustees approved the change in name." Jordan pointed out that the change of name will in no way affect the community service performed for over 20 million Americans across the country. Last year Blood Services furnished nearly 200,000 units of blood and derivatives in its service area. Blood Services of Mississippi provides for the blood needs of 45 communities in the state through 57 medical institutions.

## Mississippian Is New AMA Board Chairman

Dr. Wesley W. Hall of Reno, Nev., a native Mississippian, has been elected chairman of the Board of Trustees of the American Medical Association. The action came at the close of the 115th Annual Convention at Chicago.

Dr. Hall has served on the AMA Board since 1961 when he succeeded Dr. George M. Fister of



*Dr. Hall*

Ogden, Utah, who was then elevated to the presidency. During 1965-66, Dr. Hall has served as vice chairman of the Board. His current term as chairman is for one year.

A native of Bolivar County, Dr. Hall received his premedical education at Mississippi College and his M.D. degree from the Tulane University

School of Medicine, being graduated in 1930. He is a Fellow of the American College of Surgeons and limits his practice to general surgery.

Also named as officers of the AMA Board were Drs. Homer L. Pearson of Miami, vice chairman, and Gerald D. Dorman of New York City, secretary-treasurer. The AMA Board consists of 15 members, the 12 elected Trustees and the president, president-elect, and immediate past president.

## Dr. Street Wins SMA Training Grant

Dr. Herbert S. Street of Jackson, a resident in ophthalmology at the University Medical Center, has been awarded a 1966-67 Southern Medical Association Residency Training Grant. The program, established by SMA in 1962, is designed to encourage and assist physicians in postgraduate training.

Dr. Street was graduated from the Vanderbilt University School of Medicine and served his internship at Fitzsimons Army General Hospital.

## Legal Action Against HEW, PHS Is Urged

Members of the medical staff of the Coahoma County Hospital at Clarksdale have asked that legal action be taken against the Department of Health, Education, and Welfare and the U. S. Public Health Service's Office of Equal Health Opportunity. The action came after the hospital was denied certification as a provider of services under Medicare.

Specifically mentioned in the resolution passed hours after the program became effective on July 1, was Robert Nash of the OEHO, the civil rights enforcement arm of the U. S. Public Health Service. The Coahoma medical staff said that "every suggestion made by the inspection teams has been fulfilled" and that Nash "arbitrarily without explanation denied approval to the Coahoma County Hospital for participation in the Medicare program." The resolution said that the hospital had complied with all requirements imposed under Title VI of the Civil Rights Act of 1964.

## Rheumatology Seminar Set at Birmingham

A postgraduate seminar in rheumatology will be conducted Aug. 18 at the University of Alabama Medical Center at Birmingham, according to Dr. Howard L. Holley, director of the Division of Rheumatology. There is no charge for the seminar.

In extending an invitation to Mississippi physicians to attend, Dr. Holley said that four respected authorities in the field would appear. They include Drs. Clayton Rich of the University of Washington School of Medicine, Norman O. Rothermich of the Ohio State University College of Medicine, Alonso Portuondo of the University of Miami School of Medicine, and Charles C. Corley, Jr., of Emory University School of Medicine.

Subject areas to be considered are "Present Concepts of the Pathogenesis and Treatment of Osteoporosis," "Clinical Experience With Indomethacin," "Rheumatic Disorders of the Upper Extremities," and "Azathioprine Therapy of Auto-immune Disease."

Physicians interested in attending are encouraged to communicate with Dr. Gene V. Ball of the University of Alabama Medical Center at Birmingham.



## Medicare Certifies Home Service Providers

Fifteen county health departments and a major Mississippi hospital have been certified as providers of home health services under Medicare, according to a statement by the Social Security Administration. Each has concluded a formal agreement to initiate services.

Health departments include those in Attala, Claiborne, Coahoma, DeSoto, Forest, Grenada, Harrison, Humphreys, Jackson, Lauderdale, Monroe, Pike, Washington, Yalobusha, and Yazoo counties. The North Mississippi Community Hospital at Tupelo has also been certified.

In late May, the State Board of Health announced that 18 county health departments were in the process of expanding and developing skilled nursing and other therapeutic services in order to qualify for certification as home health

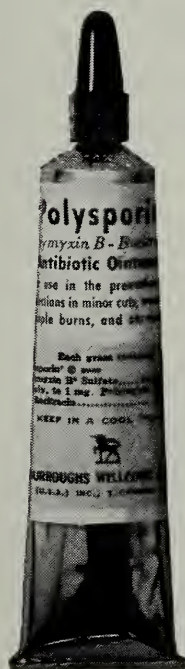
agencies under Medicare. Those not included in the initial certification and contract list are health departments in Neshoba, Noxubee, and Winston counties.

Home health services are authorized as a benefit of Part 1-A, hospital care, and Part 1-B, the voluntary supplementary insurance, of Medicare. Under hospital services, up to 100 home health service visits annually are authorized on prescription of the attending physician but only after the precondition of hospitalization has been met. Under Part 1-B, the attending physician may prescribe home health service visits when needed, even though the patient has not been hospitalized.

Under the Medicare law, hospitals, clinics, medical schools, public health departments, and subdivisions of local or state departments of public welfare are eligible to qualify as providers of home health services. To be eligible for such services, the Medicare beneficiary must be under the care of a private physician with written orders subject to renewal at least every two months.

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# JOURNAL of the Mississippi STATE MEDICAL ASSOCIATION

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orexia, and slight gastric distress. If excessive drowsiness occurs, it may be necessary to increase the interval between doses. Persons on full dosage should not operate any vehicle. Use may result in overgrowth of nonsusceptible organisms. If infections appear during therapy, appropriate measures should be taken. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Infections caused by beta-hemolytic streptococci should be treated for at least 10 full days to help prevent rheumatic fever or acute glomerulonephritis. Use of tetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect has been observed in usual short treatment courses.

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# NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

September 1966

Dear Doctor:

Federal licensing of all automobile drivers and enactment of federal highway laws is urged by the president of the American Trial Lawyers Association. Joseph Kelmer of New York told the 25,000-member association's convention that drivers should be "tested scientifically and medically" for licenses under federal laws.

Kelmer said state licensing laws give "political protection" to the aged, infirm, reckless, and chronic violators. State medical association believes that to examine every applicant for driver license is a waste of medical manpower.

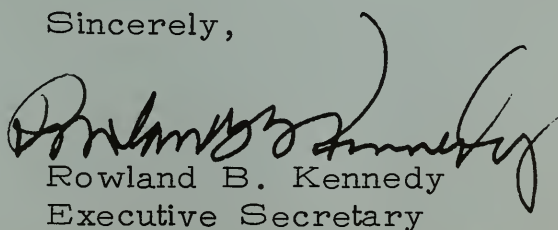
The largest hospital in the world under one roof, New Orleans Charity, now has one of the world's largest vending machine systems. A local company has installed 150 vending machines in the hospital to dispense drinks, food, candy, and cigarettes. System even has full time servicemen equipped with pocket radiophones.

Urgent warnings have been issued against an unlabeled, illicit Mexican drug represented to be of value in the treatment of arthritis. Said to be dipyrone, dimethyl pryazalone sulfanilamide, the agent is associated with fatal agranulocytosis. A Mexican physician at Piedras Negras, Mexico, is said to be distributing the drug.

Bills pending before the current session of the Alabama legislature would open doors for licensure of foreign-born, non-citizens. Measures, initially introduced as local and private bills to secure licensure for a single foreign physician, Medical Association of Alabama says that enactment would be an opening wedge to compromise state's high licensure standards.

The baffling seven year cycle of viral hepatitis comes around again during 1966-67, according to the U. S. Public Health Service. Disease first became reportable in 1952 and in 1953 a high point was hit. 1960 was a record year with 64,000 cases, and sabbatical high is anticipated this fall and winter.

Sincerely,



Rowland B. Kennedy  
Executive Secretary



## DATELINE - MEDICAL AMERICA

### Heart Association, Cancer Society See 'Cartwheel' Profit

Washington - A private bill before Congress, H.R. 13150, proposes to permit the American Heart Association and the American Cancer Society to purchase 3 million silver dollars held by U.S. Treasury and sell them as collectors items to the highest bidders. AHA and ACS officials estimate that they could gross as much as \$35 million, since silver dollars are no longer minted. Bill is sponsored and supported by Rep. Wright Patman (D., Texas).

### Nebraska Repudiates Doctrine of Charitable Immunity

Lincoln - The Nebraska Supreme Court has struck down the doctrine of charitable immunity, the old theory that a charitable hospital is immune from suit under "implied waiver" and "public policy." Award was made for allegedly negligent administration of anesthetic resulting in cardiac arrest in charity patient. Nebraska action is most recent in a succession of similar repudiations by states. Citation is Myers v. Drozda, 141 N.W. 2d 852 (Neb., Apr. 22, 1966).

### Clinton Lions Wage Anti-Rabies Campaign

Clinton, Miss. - The Clinton Lions Club summer service project was an anti-rabies campaign, organized along the lines of the medical societies' Sabin vaccine program. Club offered rabies vaccination to all susceptible pets with Drs. Joe Branson and Bill Williams, both veterinarians and members, doing the honors. Turnout exceeded expectation with 600 dogs, a few cats, one rabbit, and a monkey. Voluntary donations helped offset vaccine costs.

### Unemployment Compensation Extension Affects Physicians

Washington - Senate action on House-passed H.R. 15119, extension and liberalization of unemployment compensation benefits, deleted tax liability on employers with just one employee but applied law to those hiring four or more persons. Physicians would have been almost universally hit under House version. New measure will raise tax rate and increase taxable wage base to \$4,800 from present \$3,000 level. Bill also sets minimum federal standards on amount and duration of unemployment benefits.

### End Of Polio Is In Sight

New York - The Health Insurance Institute says that its biostatisticians see the end of poliomyelitis in the United States as a result of the Salk and Sabin vaccines. Incidence has declined from a pandemic 58,000 cases in 1952 down to 59 cases, mostly in Texas, in 1965. For first seven months of 1966, only 25 cases have been reported.





ORIGINAL PAPERS

## Severe Diarrhea In Infants And Children

STANLEY E. CRAWFORD, M.D.

Memphis, Tennessee

THERE HAS BEEN a striking reduction in mortality from diarrhea during infancy. Dehydration and the disturbances in electrolytes and acid-base balance which are associated with severe diarrhea in this age group remain a common problem and require intelligent fluid therapy. It is now possible to select antimicrobial agents which exert a specific effect in controlling and eliminating infections.

Diarrhea, a symptom, may be caused by a host of etiologic factors. Noninfectious diarrhea may accompany numerous conditions in infancy which cause irritation and hypermotility of the intestine but often less severe symptomatology than infectious diarrhea. Laxatives and starvation are simple problems whereas food intolerance, allergy, celiac disease (sensitivity to wheat or rye gluten) and cystic fibrosis of the pancreas are more complex. Megacolon in infants may present with diarrhea rather than with the classic picture of chronic constipation.

Recently, lack of intestinal disaccharidase activity (lactase, maltase, saccharase) has been shown to be responsible for a state of chronic diarrhea with acute exacerbations of variable severity and failure to thrive.

From the Department of Pediatrics, University of Tennessee College of Medicine, The Frank T. Toby Memorial Children's Hospital and Le Bonheur Children's Hospital.

Read before the Section on Pediatrics, 98th Annual Session, Mississippi State Medical Association, Jackson, May 9-12, 1966.

Disorders of carbohydrate absorption and digestion result in a fermentative diarrhea with the pH of fresh stool less than 5.5 as checked by nitrozone paper at the bedside. The acid watery stools contain lactic acid, organic acids and the nonabsorbed sugar. An unexplained mellituria occasionally occurs. The diarrhea, abdominal distention, irritability, and failure to thrive clear when the offending sugar is removed from the diet. Tolerance testing with various sugars establishes the diagnosis as may enzymology upon a peroral jejunal mucosal biopsy.<sup>1</sup>

Table 1 presents an etiologic classification of infectious gastroenteritis (enteric) and recommendations for antimicrobial therapy.

### INFECTIOUS DIARRHEA CAUSES

The causes of infectious diarrhea may vary during different seasons and in different geographical areas. Viral gastroenteritis may predominate during certain seasons and bacterial infections during others; bacillary intestinal infections are more frequent in the lower socio-economic group, especially in rural areas of the South. Physicians everywhere must be alert to the ever-present threat in newborn nurseries of infection due to pathogenic strains of *Escherichia coli* as well as epidemic neonatal infections caused by viral agents. Intensive study of gastroenteritis has led to recognition of enteropathogenic viruses such as ECHO and

## SEVERE DIARRHEA / Crawford

Coxsackie groups. The importance of other viral agents will be determined by further investigation. Winter "viral" gastroenteritis has thus far eluded the search for a pathogen.

Although it is impossible to predict the agent which is the cause of gastroenteritis on the basis of clinical information alone, some clues are helpful. Bacillary dysentery is more frequent in the summer and early autumn and occurs in families practicing substandard hygiene. In one series of cases of diarrhea in indigent patients at our hospital, stool cultures were positive for *Salmonella* or *Shigella* organisms in 15 per cent.<sup>5</sup> Stools con-

taining mucus, blood and pus are often produced by infections of this type. It is well known that shigellosis is associated with extreme toxicity, a higher incidence of convulsions, nuchal rigidity, stupor, shock and other symptoms suggesting an abnormality of the central nervous system. Blood cultures may be positive for *Salmonella*, but for unknown reasons this is not true in infection caused by *Shigella*. In patients with sickle cell anemia, including hemoglobin C-S disease, the *Salmonella* and paracolon organisms may cause osteomyelitis in addition to gastroenteritis.<sup>6-9</sup>

Pathogenic *Esch. coli* of specific serotypes are of prime importance as causes of diarrhea in very young infants. Serotyping and the fluorescent anti-

TABLE 1  
ANTIMICROBIAL TREATMENT OF INFECTIOUS DIARRHEA  
ACCORDING TO ETIOLOGIC CLASSIFICATION

Pathogen	Drug of Choice	Dosage	Comment
1. Virus	None, unless secondary infection is present		Diarrhea due to enteroviruses (ECHO, Coxsackie) frequently classed as being of unknown cause because bacterial pathogen is not isolated. Lymphocytosis or leukopenia or both are helpful signs but not always present
2. <i>Shigella</i> (species dysenteriae (shigae), flexneri, boydii, sonnei)	Tetracycline Ampicillin	Tetracycline: oral, 20-30 mg./kg./day; I.V. 15 mg./kg./day Ampicillin 75-150 mg./kg./day	Serotypes of <i>Sh. flexneri</i> and <i>Sh. sonnei</i> most common in United States. Treat for five to seven days and until at least one stool culture is negative. Not accompanied by bacteremia
3. <i>Salmonella</i> <sup>2-4</sup> (about 14 groups, several hundred serotypes). Examples: <i>Sal. typhosa</i> (typhi) paratyphi A, paratyphi B (sepsis); <i>Sal typhimurium</i> , enteritidis (gastroenteritis)	Chloramphenicol is drug of choice, but a safer, more dependable drug is needed Ampicillin Cephalothin	Oral, I.M., I.V.: 50-100 mg./kg./day. Total dose not to exceed 2 gm. a day Cephalothin 100-200 mg./kg./day I.M. or I.V.	Chloramphenicol should be reserved for cases proved by culture unless patient is severely ill. Treat for at least one week after symptoms have subsided. Negative stool cultures are desirable, but carrier rate is very high in spite of therapy <sup>2</sup>
4. <i>Escherichia coli</i> (pathogenic serotypes <sup>2</sup> are 0111:B <sub>1</sub> , 0127:B <sub>5</sub> , 055:B <sub>5</sub> , 026:B <sub>6</sub> , 086:B <sub>7</sub> , 0112:B <sub>11</sub> , 0124:B <sub>17</sub> , 0125:B <sub>15</sub> , 0126:B <sub>16</sub> , 0128:B <sub>12</sub> , 0119:B <sub>14</sub> )	Neomycin; check antibiotic sensitivities as guide Colistimethate orally Kanamycin I.M.	Oral: 50-100 mg./kg./day Colistimethate 25 mg./kg./day orally Kanamycin 15 mg./kg./day I.M. for 2 weeks only	Patients usually less than two years of age; associated with nursery epidemics. Laboratories must be prepared to identify the specific serotype in order to avoid reports of "normal flora." Stool often yields a pure culture of type-specific <i>Esch. coli</i> . Fluorescent antibody technic helpful. Treat for 7 to 10 days



<i>Pathogen</i>	<i>Drug of Choice</i>	<i>Dosage</i>	<i>Comment</i>
5. <i>Staphylococcus aureus</i>	Penicillin, but sensitivity studies required. If penicillin-resistant, methicillin (I.M.) or oxacillin (orally) may be indicated	Methicillin: I.M. or I.V., 100-300 mg./kg./day Oxacillin (oral), same dosage	Diarrhea may follow antibiotic therapy, staphylococcal overgrowth resulting from systemic broad-spectrum antibiotics. This pathogen rarely produces nursery epidemics of gastroenteritis; it may cause pseudomembranous enterocolitis. Gram-stained smear of feces diagnostic. Routine enteric media inhibit growth
6. Miscellaneous (Aerobacter, <i>Pseudomonas</i> , <i>Proteus</i> , paracolon)	Based on sensitivity studies. Polymyxin B, streptomycin to be considered or other agents depending on culture results	Polymyxin B: oral, 10-20 mg./kg./day; I.M., 2-2.5 mg./kg./day Streptomycin: oral, 50 mg./kg./day (not absorbed); I.M., 20-40 mg./kg./day	These organisms are not frequently a primary cause of gastroenteritis. May be seen in postantibiotic diarrhea
7. <i>Candida albicans</i>	Nystatin	Oral: 100,000-500,000 units three times a day for 5-10 days	Rarely a primary cause and usually associated with postantibiotic diarrhea. Use of direct smear for diagnosis
8. Amebiasis	Several drugs, in combination or succession. <sup>12</sup> (1) tetracycline, 10 days; (2) carbarsone, second 10 days; 10 mg./kg./day; (3) diiodohydroxyquinoline (DIODOQUIN®), third 10 day period; 15 mg./kg./day		Relatively rare in children in our experience

body technic are now demonstrating pathogenic strains in many stool specimens which formerly would have been considered to harbor only "normal flora." These enteropathogenic coliform organisms have been isolated from asymptomatic carriers and from household pets.<sup>10, 11</sup> Diarrhea in a newborn infant requires prompt culture for *Esch. coli* with serotyping because of the danger of rapid spread to other infants. Bacteriologic monitoring of nursery personnel is prudent and should include persons who enter the nursery only occasionally, such as the laboratory and x-ray technicians.

Organisms which are not ordinarily considered to be enteropathogenic may assume importance in young infants. These include strains of *Aerobacter*, *Pseudomonas* and *Proteus*. Amebiasis,<sup>12</sup> other parasites and monilial overgrowth can cause abnormal stools. Overgrowth of *Candida albicans* can be a problem as can a staphylococcal superinfection in

children who have received a broad-spectrum antibiotic such as tetracycline over a long period.

## PARENTERAL INFECTION

In the infant, parenteral infection may play a minor role as a cause of gastroenteritis. In this respect, gastrointestinal symptoms including diarrhea may be associated with sepsis, otitis media, pharyngitis and urinary tract infection. These findings in a case of severe diarrhea must not end the search for a primary etiologic agent.

An infant with severe gastroenteritis is dehydrated and usually has a marked fluid volume deficit resulting in an elevation of the hematocrit. Usually a metabolic acidosis is present. In a severely ill infant the acidosis may be uncompensated and blood pH values as low as 7.0 and plasma carbon dioxide content of less than 10 mEq. per liter may be observed. The metabolic

acidemia reflects, in addition to a base bicarbonate loss, the ketosis of starvation and the accumulation of organic acids and non-bicarbonate anions.

In the presence of dehydration and metabolic acidosis, plasma potassium levels may be normal, low or elevated. Hyperkalemia can be correlated with the degree of acidemia; the tissue cells give up potassium to the extracellular fluid in exchange for sodium and hydrogen and, as a result of altered renal function, potassium excretion is decreased and blood urea nitrogen elevated. We have observed potassium levels ranging from 2.0 to 8.2 mEq. per liter in cases of severe infantile diarrhea.<sup>5, 13</sup> Despite elevated serum potassium levels, there is always a body deficit with the need for replacement of this ion in therapy.

As a result of diarrhea, sodium as well as other ions are lost from the body. Serum sodium levels may be low, normal or elevated, depending on the ratio of sodium loss to water loss. Values ranged from 119 to 194 mEq. per liter in our reported series.<sup>5, 13</sup> Marked hypertonicity of body fluids occurs when serum sodium values are higher than 150 mEq. and water loss has exceeded solute loss. This will be discussed later.

DOSAGE GUIDES

Either of two dosage guides may be used (Table 2). The one based on body weight must be adjusted for age. The system based on surface area is the same for all age groups but requires an avail-

able table or nomogram. Table 3 relates surface area to weight<sup>15</sup> and should prove useful.

In the presence of significant dehydration the first step is rapid intravenous administration of a hydrating solution to restore plasma volume, combat shock and assure adequate renal blood flow. Subcutaneous administration of fluid and electrolytes is to be discouraged in favor of the intravenous route. Renal function must be assured prior to the use of multiple electrolyte solutions which contain adequate quantities of potassium for restoration of the body deficit. Acidosis and dehydration, as already stated, may result in elevated serum potassium levels, thus necessitating the use of these solutions are given in Table 5.<sup>14</sup>

HYDRATING SOLUTIONS

Several satisfactory initial hydrating solutions are outlined in Table 4. Each works well within the spectrum of the clinical situation. In our opinion the solutions containing alkali are to be recommended in the treatment of infants with diarrhea.

Following the initial hydration therapy and after adequate renal function has been noted, multiple electrolyte solutions are given for maintenance and to replace electrolyte and water deficits. Examples of these solutions are given in Table 5.<sup>14</sup>

If voiding does not occur during the initial hydration period which may be extended as outlined in Table 2, the presence of abnormal renal function must be considered and fluid therapy adjusted accordingly. Table 2 offers guides for dosage, but the clinical response may influence the selection of solutions and the quantity. The changes in

TABLE 2  
DOSAGE AND RATE OF ADMINISTRATION OF SOLUTIONS LISTED IN  
TABLES 4 AND 5 ACCORDING TO SURFACE AREA AND BODY WEIGHT<sup>14</sup>

Solution	Dosage and Rate of Administration	
	SURFACE AREA*	BODY WEIGHT*
Initial hydrating† (Table 4)	500 ml./m. <sup>2</sup> /hour; rate, 8 ml./m. <sup>2</sup> /minute	30 ml./kg./hour; rate, 0.5 ml./kg./minute
Multiple electrolyte solutions for replacement and maintenance (Table 5)	Severe dehydration: 3,000 ml./m. <sup>2</sup> /day; rate, 125 ml./m. <sup>2</sup> /hour	180 ml./kg./day; rate, 7.5 ml./kg./hour
	Mild to moderate dehydration: 2400 ml./m. <sup>2</sup> /day; rate, 100 ml./m. <sup>2</sup> /hour	140 ml./kg./day; rate, 6 ml./kg./hour
	Maintenance therapy: 1500 ml./m. <sup>2</sup> /day; rate, 60 ml./m. <sup>2</sup> /hour	100 ml./kg./day; rate, 4 ml./kg./hour

\* To convert body weight to square meters, see Table 3. The recommended dosages based on body weight are for infants from birth through 18 months of age. For older children, they should be modified as follows: 19 to 36 months, 80 per cent of quantities given in table; three to six years, 70 per cent; 7 to 12 years, 50 per cent; more than 12 years, 50 per cent.

† With failure of urination, repeat this dosage once. Failure to urinate signifies possible renal dysfunction.



degree of dehydration from severe to moderate and from moderate to mild obviously influence the quantity of parenteral fluid to be given from day to day. Oral feeding and a decrease in stool volume correspondingly reduce the total quantity of fluid needed parenterally.

An objective comparison of the three listed methods of parenteral fluid therapy in severe diarrhea has been reported previously.<sup>5</sup> A normal state of homeostasis without wide fluctuations in cation-anion levels was achieved best by the Darrow method. The Butler-Talbot regimen was slow in repairing acidosis, especially in young infants. We recommend twelfth-molar sodium racemic lactate solution as the initial hydrating solution irrespective of the method followed for replacement and maintenance. For premature and term infants less than one month of age, modified Butler's solution No. 48 is appropriate after initial hydration.

IV THERAPY CAUTION

Intravenous therapy in small infants must be checked carefully to avoid giving large volumes of

TABLE 3  
CONVERSION OF WEIGHT FROM KILOGRAMS  
TO SQUARE METERS OF BODY SURFACE AREA<sup>15</sup>

Weight (Kilograms)	Square Meters (m. <sup>2</sup> ) or Body Surface Area
1.0	0.10
1.5	0.12
2.0	0.15
2.5	0.18
3	0.20
4	0.25
5	0.29
6	0.33
7	0.38
8	0.42
9	0.45
10	0.49
11	0.52
12	0.55
13	0.58
14	0.61
15	0.64
16	0.71
17	0.74
18	0.76
19	0.79
20	0.82
21	0.85
22	0.87
23	0.90
24	0.93
25	0.95
26	1.00

fluid too rapidly. For safety the 24 hour volume should be divided and the contents of each bottle given over a period not to exceed six hours. The new microdrip pediatric sets are helpful in this regard.

Several well-documented methods of fluid and electrolyte therapy will give good results, but the physician should be familiar with at least one method and must realize that any therapeutic regimen must be altered at times to fit the clinical situation.

TABLE 4  
INITIAL HYDRATION THERAPY

<i>Suggested Initial Hydrating Solutions<sup>14, 16, 17</sup></i>	<i>Approximate Ionic Osmolality (Milliosmols Per Kilogram)</i>
1. Twelfth-molar sodium racemic lactate in 5 per cent dextrose; Na 84, HCO <sub>3</sub> * 84 mEq. per liter (Gaston's method) . . . . .	168
2. 0.45 Per cent sodium chloride in 5 per cent dextrose; Na 77, Cl 77 mEq. per liter (Darrow's method) . . . . .	154
3. 0.33 Per cent sodium chloride in 5 per cent dextrose; Na 50, Cl 50 mEq. per liter (Butler-Talbot method) . . . . .	100
4. Equal parts of sixth-molar sodium racemic lactate, normal saline, and 10 per cent dextrose in water; Na 107, HCO <sub>3</sub> * 56, Cl 50 mEq. per liter, dextrose 3 1/3 per cent (see text, Hypertonic Dehydration) . . . . .	213

\* The lactate ion is replaced by metabolically generated HCO<sub>3</sub> in the body. For dosages and rates of administration, see Table 2.

Note: If hypovolemic shock is present, one should first administer plasma, dextran or whole blood. Dosage (same for all age groups) is 10 ml. per kilogram of body weight. Proceed with initial hydration therapy.

To illustrate the use of the data in Tables 2 to 5 (the surface area of the body being the criterion for dosage), let us consider a case in which an infant weighing 10 kg. has severe dehydration and acidosis due to diarrhea and has lost 0.5 kg. in weight. His surface area is about 0.5 square meter (m.<sup>2</sup>) (Table 3). An initial hydrating solution is chosen from Table 4 (we prefer twelfth-molar sodium lactate in 5 per cent dextrose) and is given intravenously at a rate of 4 ml. per minute for one hour (8 ml. per m.<sup>2</sup>; Table 2). At the end of this one hour period, provided the infant has urinated, a solution for replacement and maintenance is chosen from Table 5. In this instance the premixed Butler-Talbot solution or a mixture of Darrow's solution and dextrose in water (Table

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5) is started at a rate of 1500 ml. per day (3000 ml. per m.<sup>2</sup>) for the first 24 hour period. As hydration improves, the same solution is continued for another 24 hours at a slower rate of 1200 ml. per day (2400 ml. per m.<sup>2</sup>; Table 2). Oral feedings of glucose and water are started as vomiting ceases, usually during the second 12 hour period of fluid therapy. Intravenous fluids are tapered to maintenance amounts during the third day, in this case to 750 ml. per day. Oral feeding of diluted skim milk with added carbohydrate is started on the third day or earlier if the patient's condition permits, and the composition of the formula is progressively altered to meet demands.

Antimicrobial therapy must be based on culture studies and directed when possible against a specific pathogen. In a severely ill infant whose clinical picture suggests bacterial infection, empirical therapy with ampicillin (because of its wide antimicrobial spectrum) is justified for a limited period while awaiting the results of the culture. The recommended drugs and dosages are listed in Table 1.

### TREATMENT METHOD

It is our policy to place the intestinal tract at rest initially, but this period need not be prolonged beyond 12 to 24 hours if vomiting has ceased. Oral feeding of glucose water may be started while parenteral fluid therapy is continuing. After 24 hours, diluted skim milk may be introduced in a stepwise manner as tolerated. Occasionally an infant who previously tolerated cow's milk may react to its reintroduction and have a recurrence

of diarrhea and vomiting. In this situation a hydrolyzed casein "milk" or soybean formula is useful.

General or ancillary care must be guided by repeated physical examinations. Abdominal distention, vomiting, decreased bowel sounds, cardiovascular abnormalities with bradycardia, and other electrocardiographic changes such as depression of the S-T segment with flattened or inverted T waves alert the physician to the presence of hypokalemia and the need for extra potassium.

### EARDRUM INVOLVEMENT

As a result of improved hydration, a previously "normal" eardrum may exhibit an acute suppurative otitis media necessitating myringotomy. Improved hydration also may unmask an anemia which was not suggested by initial hemoglobin or hematocrit values, and pulmonary infection may appear for the first time.

Aspirin should not be given to patients with diarrhea and acidosis, especially in the presence of oliguria. Fever should be controlled by other means such as sponging and regulation of environmental temperature.

An acute illness ordinarily does not seriously impair the overall nutritional status. Although parenteral fluid therapy does not provide maintenance caloric requirements, short periods of nitrogen deficit are well tolerated. It is best to reserve fat emulsions or solutions of amino acids for chronic situations. Use of B vitamins and ascorbic acid is rarely indicated in acute diarrhea. It is worth recalling, however, that recurrent attacks of diarrhea have been seen in infants who

TABLE 5  
SOLUTE COMPOSITION OF MULTIPLE ELECTROLYTE SOLUTIONS  
USED FOR REPLACEMENT AND MAINTENANCE<sup>14, 16, 17</sup>

Solution	Composition*								Approximate Ionic Osmolality (Milliosmols per Kilogram)
	Na	K	Mg	Ca	HCO <sub>3</sub> (AS LACTATE)	CL	CHO (GRAMS PER LITER)	HPO <sub>4</sub>	
Premixed solutions:									
1. Butler-Talbot No. 75	40	35	0	0	20	40	15	50	142.5
2. Butler modified No. 48 for premature or newborn infants	25	20	3	0	23	22	3	50	93
Solutions to be mixed with 10 per cent dextrose in water:†									
3. Darrow's solution	122	35	0	0	53	104	0	0	314

\* Milliequivalents per liter, except as otherwise indicated.

† For severe dehydration, mix four parts Darrow's solution with five parts 10 per cent dextrose in water; for moderate dehydration, mix three parts solution with four parts D<sub>10</sub>W; for maintenance, mix two parts solution with three parts D<sub>10</sub>W.



later exhibit both folic acid deficiency and megaloblastic anemia.<sup>18</sup>

We have been unimpressed with medicinal "corks" and do not use medications designed to check the diarrhea, absorb "toxins," or slow intestinal motility. Paregoric may be used for extreme tenesmus, if given cautiously and with the realization that it may mask symptomatology; the dosage is 0.25 ml. per kilogram of body weight per dose.

Hypertonic dehydration deserves special comment and requires a modified therapeutic approach. It is associated with a higher mortality rate and often with permanent central nervous system sequelae.

Losses of water are out of proportion to losses of electrolytes, but both must be given for successful replacement therapy. As water loss occurs, water shifts from within the cell to the extracellular compartment, thus preserving blood volume. Sodium concentrates inside the cell, with a loss of the intracellular potassium.

The physical findings may help in diagnosis. Skin turgor may remain deceptively normal but the skin feels doughy or like sponge rubber while oral mucous membranes are dry. Blood pressure and the quality and rate of the pulse often deny that collapse is imminent. Muscle tremors, rigidity and even opisthotonic posture may be seen and deep tendon reflexes become hyperactive. Nervous system manifestations include eventual depression, lethargy and coma. Infants seem especially vulnerable. Their intense thirst may have been ignored. Vomiting and hyperpnea accentuate the excess loss of water in hypotonic stools.

## WATER INTOXICATION

During hydration therapy, cellular water intoxication may develop if extremely hypotonic solutions are used; this may occur in spite of high serum sodium values. Convulsions at this time have been stopped by the administration of hypertonic sodium chloride.<sup>19</sup> It is for this reason that we recommend a hydrating solution with a higher sodium content than ordinarily used in cases of diarrhea associated with isotonic or hypotonic dehydration. For example, a solution composed of equal parts of sixth-molar sodium racemic lactate, normal saline, and 10 per cent dextrose in water, which contains 107 mEq. per liter of sodium (Table 4), is ionically hypotonic and especially so in these hypertonically dehydrated infants. The use of such a hydrating solution has not been associated with posthydration seizures in the cases studied at our hospital. Other investigators recommend a hydrating solution containing less sodium, but

all agree that it is wise to hydrate these patients at a slower rate than usual.<sup>20, 21</sup> Certainly the sodium concentration in the hydrating solution for these hypertonically dehydrated patients should not be less than 75 mEq. per liter.

In any series of cases of diarrhea about 8 to 20 per cent of patients have initial serum sodium values greater than 150 mEq. per liter. Serum chloride levels tend to be greater than 125 mEq. per liter, and osmolality greater than 300 milliosmols per kilogram of body water. It is well to recall that the requirements of sodium in normal children are 50 to 70 mEq. and the maximal sodium tolerance is about 250 mEq. per square meter of body surface per day.<sup>22</sup> Despite elevated sodium levels in these patients, there is actually a total body sodium deficit.

## ENVIRONMENTAL FACTORS

Diarrhea frequently occurs during winter months when environmental humidity is low and bedrooms act as "ovens of desiccation," greatly increasing cutaneous and pulmonary water loss and promoting hypertonic dehydration. The physician may himself provoke this type of dehydration by use of oral salt solutions which contain more than 50 mEq. of sodium per liter or the use of diluted skim milk, which has a high content of sodium and protein.<sup>23</sup>

Complications during hydration include generalized seizures, especially if therapy is too rapid or if extremely hypotonic electrolyte solutions are used. Low serum calcium values may add to the seizure problem. Rarely, hemorrhage or subdural collections of fluid give additional central nervous system symptoms. Cerebrospinal fluid protein may be elevated.

## SUMMARY

Severe diarrhea in infants and young children is discussed in terms of etiology, specific drug therapy, and correction of acid-base and fluid-electrolyte imbalance. Details of initial hydration therapy and of subsequent replacement and maintenance are presented. Also included is a discussion of hypertonic dehydration, which may be associated with diarrhea and requires a special therapeutic approach.

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858 Madison Ave.

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## WAYWARD YOUTH

Try this quotation as a sign of the times:

"Our youth now love luxury; they have bad manners, contempt for authority; they show disrespect for elders and love to chatter in place of exercise. They no longer rise when elders enter the room. They contradict their parents, chatter before company, gobble up their food, and tyrannize their teacher."

A new complaint against some youngsters? Hardly, because it was spoken by Socrates in 400 B.C.



# Low Back Pain

LLOYD A. MERBITZ, M.D.  
Greenville, Mississippi

LOW BACK PAIN IS A PROBLEM which at some time or another confronts most practicing physicians, even pediatricians. Dr. Paul C. Williams of Dallas has stated that children who complain of leg pain at night and who have the so-called "growing pains" may show neurological changes in their lower extremities due to disc disease.

Pain in the low back may be due to a number of etiologic factors. To ascertain the etiology, it is necessary to differentiate among them. The complaints that bring the patient to the doctor are usually pain, weakness, stiffness and disability, or a combination of these symptoms. Were these complaints present in the initial attack? Have there been previous similar ones? Did the first attack follow trauma or was it of insidious onset? These are some of the questions the physician should ask.

Low back pain that follows trauma may be caused by simple strains (that is, overstretching of the structures), sprains (the rupture of ligaments or of their attachments), fractures, or combinations of these injuries. Trauma may also aggravate pre-existing conditions, as noted below.

In cases of insidious onset, differentiation should be made between structural, mechanical, or pathological causes. There may be abnormal effacing or poorly developed lateral articulations, transitional vertebra, spina bifida, acute lumbosacral angle, spondylolysis or spondylolisthesis. Arthritic changes, either of a rheumatoid or hypertrophic nature, may also cause low back pain. All too often vascular changes, which can cause low back pain mimicking the symptoms of a herniated nucleus pulposus, are not considered and are,

therefore, missed. Tumors, though rare, must also be considered in the etiology of low back pain. These tumors may be of bony origin, either primary or metastatic, or may be of soft tissue or neurogenic origin.

The diagnosis of the pathology present in cases of low back pain is made by a systematic approach to the problem.

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*Low back pain is a problem which most practicing physicians see at one time or another. The author discusses etiologic factors, differential diagnosis and treatment. He basically advocates a conservative management program but also discusses the place of surgery in the management of these patients.*

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First, the history is of primary importance to know how and when the original symptoms appeared, whether or not this is the first attack or if there have been previous similar ones. If there is any leg radiating pain, the patient should be questioned closely as to what part of the leg is involved and if the pain distribution goes all the way down into the toes or just to the knees. Bilateral leg pain tends to suggest a poorer prognosis, as it may mean a very large fragment of herniated nucleus pulposus in a midline position or a tumor. Subjective complaints regarding sensation or weakness are also to be noted. Coughing or straining, by elevating the cerebrospinal fluid pressure, may aggravate the back pain and the leg pain or both. The physician should determine what, if anything, makes the pain worse or gives the patient relief from his symptoms.

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A thorough systematic physical examination will help determine etiological causative factors. These patients should be examined nude, if at all possible. It is particularly helpful to watch the patient undress and dress again. Much information can be gained from this observation. Patients who may profess that they cannot bend over during the actual examination because of pain are sometimes found to bend over very easily when tying their shoes. Observe the patient standing from the rear, looking for deformities, such as scoliosis, exaggeration of the normal kyphosis or lordosis, sloping pelvis, muscle spasm, or any other abnormal findings.

Leg length is best checked with the patient standing, by observing for pelvic tilt. This is more accurate than measuring from the anterior superior iliac spine to the medial malleolus. Observe the bending patient for range and site of motion, whether the motion is in the spine with a gentle lumbar curve or in the hips. When palpating the back, check for muscle spasms, generalized or localized point tenderness. Point tenderness may be found over the spinous processes of the lumbar vertebrae or over the interspinous spaces indicating interspinous bursae.

### METHODS OF EXAMINATION

Jarring the forward flexed patient by striking him with the ulnar side of the hand over the spine will usually cause severe pain in the presence of a destructive lesion of bone. Tightness of the tensor fascia may also be felt. It may be of significance in solving the problem. A tight tensor fascia may limit flexion of the pelvis in patients with an exaggerated lumbar lordosis because of its anterior origin on the ilium, which is in front of the axis of pelvic rotation.

Deep pressure in the buttocks over the sciatic nerve may produce severe pain locally or radiating down the leg, indicating a sciatic neuritis. These patients also frequently show tenderness of the peroneal nerve when it is compressed over the neck of the fibula. Motion in the hips should be checked to rule out hip pathology. Peripheral pulses should also be sought, as should trophic changes in the legs and feet which may indicate vascular insufficiencies. Thighs and calves should be measured to detect atrophy in fairly longstanding cases, an indication of nerve root involvement or possibly just disuse atrophy.

The neurological examination is most important. Physiologic reflexes as well as pathologic reflexes, such as the Babinski reflex, should be

sought for. Ankle or knee clonus may help to rule in an upper motor neuron lesion. Sensory changes are noted for the dermatome patterns which may help in determining specific nerve root involvement. Loss of the Achilles reflex suggests a lesion of the fifth lumbar disc and involvement of the first sacral root. A depressed or absent knee jerk suggests degeneration of the fourth lumbar intervertebral disc with involvement of the fifth root or a prolapsed nucleus pulposus of the third disc.

### DISC INVOLVEMENT

Weakness of the extensor hallucis longus muscle suggests a prolapse of disc material at the fourth lumbar intervertebral space with involvement of the fifth root. Weakness of the gastrocnemius muscle suggests a prolapse of disc material at the level of the fifth lumbar intervertebral disc. Absence of the posterior tibial reflex suggests a lesion at the fourth lumbar intervertebral space; however, this is of value only if the reflex is present on one side and absent on the other, because it is frequently not present normally.

An adequate x-ray examination is necessary in conjunction with the physical examination. It should include an AP, a lateral, and a spot lateral film of the lumbar and lumbosacral joint and, in some cases, oblique lumbosacral views plus a standing lateral view. The x-ray examination should demonstrate any congenital abnormalities, degenerative changes, destructive lesions or fractures. Special x-ray examinations, such as myelography, should also be used in certain selected cases. Myelography is to be reserved for those patients who are definitely candidates for surgery. In my hands, the use of 12 cc. of Pantopaque, instead of the usual 3 to 6 cc. for myelograms, has produced a higher percentage of positive examinations.

### WILLIAMS TREATMENT

The ever present problem in day to day practice is what to do with these patients. Basically a conservative management program, patterned after that used and described by Dr. Paul C. Williams of Dallas, has proved most successful. This writer had the opportunity to work under Dr. Williams during his residency and also the dubious honor of learning Dr. Williams' methods first hand by being his patient with a flare-up of an old herniated nucleus pulposus.

The Williams treatment is based on two prime factors: (1) rest and (2) exercises. The rest should be complete bedrest in a comfortable position on a firm bed, preferably with some flexion of the hips and knees. Traction, either leg or pelvic, is a good way to keep the patient at



complete bedrest. It apparently serves no other beneficial purpose. Muscle relaxants used for a few days in the patients with severe muscle spasm usually produce some therapeutic effect. It is to be noted that the same muscle relaxant does not work in all patients, and it may be necessary to use a second or even a third brand before the desired results are obtained. A tranquilizing drug will help to relax and to make the bedrest more tolerable for patients who are nervous and tense. Mild local heat, preferably of a moist nature, also helps relax the tight muscles and to relieve the pain.

Patients with an acute herniated nucleus pulposus should be so treated with at least two weeks of complete bedrest. If no improvement is noted after that period of conservative management, surgery may be considered. This method of treatment is that recommended by Dr. Kemp Clark, professor of neurosurgery and chairman of the department of neurosurgery at Southwestern Medical School in Dallas. In a conservative management program of rest, heat, muscle relaxants and a tranquilizing drug, an analgesic, such as Darvon with A.S.A., is usually sufficient to control the pain. Narcotics are not indicated except in certain selected patients.

## SECOND PHASE

As these patients lose their muscle spasm and become more comfortable, the second phase of the treatment is instituted. This consists of postural correction exercises begun in bed. As the patient progresses, additional exercises are added. The exercises are basically those described by Dr. Williams or some minor modification thereof. It takes considerable time to instruct these patients in their treatment program and in their exercises, so that they fully understand the program and what it is designed to do. The satisfactory conclusion of the treatment is in direct proportion to the patient's cooperation and follow-up.

He must understand that no lasting relief or improvement can be secured unless he is constantly aware that he has a "back." Poor posture with its contributing factors of chronic strains must be improved and a whole new approach to living instituted. The exercises must be done by the patients religiously twice daily for many months after leaving the hospital. He must be taught to sit, stand, and lie properly. He must also be taught to lift with his legs and not with his back. Every patient's environment and work habits differ. The physician must be aware of these differences to help the patient correct im-

proper habits and thereby protecting his back from future strains.

Surgery should be reserved for those few patients who do not improve on a conservative program. If a patient will not cooperate in his treatment program prior to surgery, one can be reasonably sure that he will not cooperate after surgery. In such patients, I am most reluctant to recommend surgical intervention.

## SURGICAL APPROACHES

The surgery itself in low back patients is of two basic types, (1) that designed to remove the herniated nucleus pulposus and (2) that designed to stabilize the lower lumbar spine. I do not feel that these two types of surgical treatment should be combined as they were routinely in the past. Surgery is indicated on the patient who has a herniated nucleus pulposus with a definite neurological deficit and severe intractable pain. Dr. Carroll Kern, chief of the neurosurgical section at the V.A. Hospital in Dallas, has stressed many times, "I operate for screaming leg pain, not for numbness." Frequently the numbness remains to a greater or less degree after the excision of the herniated nucleus pulposus, and this numbness the patient learns to live with.

Stabilizing operations or spine fusions should be done when all else has failed. Selective choosing of patients for this type of surgery is highly recommended. Primary requisites are a well-motivated patient, in good health, and preferably under 45 years of age.

## ARTHRODESIS INDICATIONS

An arthrodesis of the lumbar spine is usually done as treatment for congenital, traumatic, or destructive lesions which do not respond to other therapy. Dr. Benjamin R. Waltberger, writing in the *Journal of Bone and Joint Surgery*, has listed indications for arthrodesis of the spine as follows: (1) A narrowed disc space causing deterioration of the articular processes with either forward or backward positioning of the superior vertebra on the one below and encroachment of the neuroforamen, (2) Spondylolisthesis, (3) Congenital anomaly, such as hemivertebra or sacralization of a vertebra, (4) Failure of relief of pain from a previous laminectomy, (5) Symptomatic non-union of a spine fusion, (6) Other factors secondary to degeneration of the intervertebral disc, such as laterally trapped nerve, epidural encirclement or a vicious form of the reflex vascular phenomenon, (7) Old healed compression fractures with secondary radiculitis and arthritis, (8) Her-

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niation of the nucleus pulposus in heavy laborers and nonskilled workers who do not change occupation to skilled light work.

Contraindications to spine fusion are: (1) Marked arteriosclerosis, (2) Minimal degenerative change or congenital anomaly in the skilled workers not performing heavy labor, (3) Some cardiovascular diseases, (4) Psychosomatic overlay and increased morbidity which might precipitate a true psychosis, (5) Obesity, (6) Other widespread evidence of degenerative skeletal changes, (7) Pending litigation or compensation, which tends to perpetuate all forms of backache.

One other type of therapy must be included here and that is the use of braces and other supports. Braces are usually of less value than fitted corsets in giving support, since they are more uncomfortable and do not significantly add to that support given by a corset. Unless these rigid braces really help the patient's pain, he will not wear them. One exception to this might be the Williams flexion brace in selected cases where the patient finds it difficult to correct an exaggerated lumbar lordosis; however, the brace is to be recommended only for limited periods of time. The patient should be told that they should discard this type of brace as soon as an improved posture can be maintained without it. As opposed to the limited use of a brace, the use of a corset in older patients suffering from degenerative lesions of the back can be of definite benefit. Many of these patients are unable to adequately do the prescribed exercises. In younger patients, use of a corset enables them to continue working while

participating in the active exercise treatment program. The physician must avoid letting these people get dependent upon corsets for support instead of well-exercised strengthened muscles.

The etiology, diagnosis, and treatment of the most commonly seen cases of low back pain have been outlined. Intrinsic and extrinsic causes have been touched upon. Steps in the diagnosis and some of the findings have also been described. The treatment recommended is that which has evolved from many sources through the writer's 14 years of orthopedic practice. The patient's full cooperation in the aforementioned types of therapy cannot be overemphasized. He must understand that his part is of primary importance for successful treatment, otherwise the prognosis is poor and no lasting therapeutic benefits may be expected. ★★★

344 Arnold Ave.

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## INSURANCE ASSURANCE

Said the life insurance agent to the undecided client: "Don't make a hasty decision on purchasing this policy. Sleep on it to-night, and if you wake up in the morning, let me know."



# Clinicopathological Conference LXXX

Conducted by the Department of Pathology  
University of Mississippi School of Medicine  
Jackson, Mississippi

*Dr. William D. Love:* "This 16-year-old Negro girl gave a history of a fever and hemoptysis which was said to be of about one month's duration. The patient was thought to be healthy until at the age of nine. She was noted to have decreased exercise tolerance in comparison to other children, and she said that she became very short of breath and 'blacked-out' on occasion. She might faint from reduced cerebral blood flow when the blood flow is shifted to the exercising extremities. In addition to that she had shortness of breath. This probably indicates a pulmonary component as well as a reduced or limited cardiac output.

"The symptoms quickly disappeared on resting, and there is no mention of fatigue. Fatigue is a symptom which should have been carefully looked for as it is another common symptom of reduced or fixed cardiac output. There was no chest pain, but she did have occasional palpitation. Otherwise she did well until March 1965, a seven year period.

"At this time she began to have more frequent shortness of breath and saw her local physician who treated her with pills and bed rest. We cannot determine whether she began having more frequent shortness of breath because she had developed bacterial endocarditis or because of some other event which occurred before the bacterial endocarditis appeared. She might have developed active rheumatic fever, or the anemia might have been due to something other than bacterial endocarditis.

"She did poorly and began having paroxysmal nocturnal dyspnea, orthopnea, nocturia and pedal edema. She saw another physician in May 1965 who digitalized her. On May 14 she presented to the doctor with cough and fever. A chest film was

taken and showed pneumonitis in the right lung. She was treated with lincomycin, possibly because of the history of allergy to penicillin. She improved and by May 19 she was virtually asymptomatic.

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*A 16-year-old Negro girl with a history of fever and hemoptysis is the subject of CPC LXXX. The patient was thought to be healthy until at the age of nine when she noticed that she had decreased exercise tolerance as compared to that of other children. Discussers are Drs. William D. Love, Robert D. Sloan, Herbert G. Langford, Harper K. Hellem, and Walter S. Gilmer, Jr.*

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"Then on May 26 she was seen again with fever and pedal edema. This is beginning to be the classical history of recurrence of bacterial endocarditis after partial treatment. Again she was treated with lincomycin and a sulfa compound, and given diuretics. Her hemoglobin had fallen to 8.8 gm. This was the first clear-cut evidence that this girl was not simply a rheumatic with pneumonia. She might have had malnutrition or hookworm infestation or some other illness to explain the anemia, but it was clear that she had something else besides pneumonia and heart failure to produce a hemoglobin of 8.8 gm. She was given an iron preparation.

"In the middle of June she began having fever again. Twice the infection responded to short courses of lincomycin. She began to cough up pinkish sputum which was frothy and associated with some pleuritic chest pain. Frothy pink sputum, of course, would ordinarily go along with

pulmonary edema. We don't know that the clinical picture as described is not that of massive pulmonary edema. Pleuritic chest pain is not a part of pulmonary edema, however, so one would think more of pulmonary embolus or thrombosis, or perhaps further episodes of pneumonia. This time the doctor referred her to the University Medical Center.

"There was no history of rheumatic fever by name or symptom, although there was a history of heart murmur since the age of 9. She had lost 14 pounds in weight since March. Allegedly her appetite had been good, and she had noticed no hematuria. There was a history of allergy to penicillin, although we are not told the details. The family history is apparently irrelevant.

"Physical examination showed a blood pressure of 110/50. We would expect an elevated pulse pressure in the presence of anemia and tachycardia from an infectious disease, so this isn't much help with the cardiac diagnosis. The temperature was only 100. She was said to be well nourished, even though she had lost 14 pounds. Apparently no petechiae were found in the mucous membranes, and no hemorrhages in the eye grounds.

#### CHEST AND HEART

"Examination of the chest was normal. There was a normal sinus rhythm and a suggestion of ventricular hypertrophy. The exact evidence of ventricular hypertrophy was not recorded, but fortunately we have the chest films to help in evaluating the degree of cardiac hypertrophy. A systolic thrill was felt at the apex. There was also a systolic thrill at the base, and these two thrills were thought to be of different intensity. Of course the intensity could be different, even if they were produced by the same lesion. The timing of the thrills would be of greatest importance in trying to determine whether they were produced by the same or different valvular lesions.

"One of the most difficult diagnoses to make on physical examination is that of mitral insufficiency when aortic stenosis is present. A low pitched murmur in the base of the neck and a high pitched murmur at the apex can be produced simultaneously by aortic stenosis. If the timing of the two murmurs is different, you can be confident that the findings at the apex are caused by mitral insufficiency. P2 was greater than A2, indicating pulmonary congestion. There was a grade three out of six systolic murmur heard at the base radiating into the neck, and there was also grade

three out of six systolic murmur heard at the apex that radiated into the axilla. The exact timing is not mentioned, presumably the timing was not characteristic or not different. No diastolic murmurs were heard on admission, but a diastolic murmur was heard later. We will have to assume that the examinations were adequate on both occasions. All pulses were full and equal.

#### ABDOMEN AND SPLEEN

"The abdomen was normal except that the spleen was down two finger breadths below the costal margin. The examiner noted that it didn't feel particularly mushy. This sends cold shudders up and down my spine. The spleen is a soft fragile organ, and as far as I know, the only one you are likely to rupture on physical examination. It is possible to palpate a spleen overenthusiastically. This is particularly common in infectious mononucleosis, which is a frequent disease in medical students. Always treat the spleen with respect.

"The liver was not felt, but bowel sounds were normo-active. Rectal and pelvic examinations apparently were not done. There was no clubbing of the extremities. You recall that clubbing is a frequent physical finding in subacute bacterial endocarditis, as well as in congenital heart disease. There was no lymphadenopathy.

"The admitting diagnosis was congestive heart failure with rheumatic heart disease and a strong possibility of subacute bacterial endocarditis. The white count on admission was slightly elevated. The hemoglobin was only 8.6 gm., confirming the low value in the history. Sedimentation rate was 46 mm. per minute, but the hematocrit was low. It is important to remember that the sedimentation rate is frequently not elevated by bacterial endocarditis.

#### LABORATORY FINDINGS

"The urine showed some albumin, a few red cells, and supposedly some sugar. There were occasional hyaline casts and few bacteria seen, presumably in an unfresh urine. Hemoglobin was 1 plus. I tried to think of some conceivable reason for some of this laboratory data being done, but I am afraid that frequently the reason is that it is easily obtained. I could think of an indication for most of it but not all.

"The direct and indirect Coombs were obtained because she was anemic, and could conceivably have a hemolytic anemia. They were both negative. Blood electrolytes were determined. She had been treated for congestive heart failure with diuretics. The chloride was 106



mEq/L, CO<sub>2</sub> 26 mEq/L, potassium normal, and sodium was 143 mEq/L, which is a little surprising. Fasting blood sugar was 97 mg. per cent. The cholesterol was determined for reasons which are obscure to me. Liver function studies were also obtained but the results are noncontributory. The uric acid was 7.8 mg. per cent. Why was this ordered, and how was the elevated valve interpreted? VDRL was nonreactive. Dr. Sloan is going to show us the x-ray films."

*Dr. Robert D. Sloan:* "X-ray coverage was limited to two chest studies. PA and lateral views were obtained on the day of admission, and a final film nine days later. The chest film on admission revealed an enlarged heart with the pattern of enlargement being nonspecific. When seen, the aorta and the pulmonary vascular trunks were not remarkable, but there was some slight coarsening of the parenchymal markings in the lung fields. In the PA view there was no evidence of a pleuritic component, but in the lateral view there was some blunting of one of the posterior costophrenic angles. Whether or not this represented the residual of a previous infarct cannot be stated.

"The final film, three days before death, was somewhat underexposed but there had been a definite increase in the prominence of the pulmonary vascular markings and the development of an edema-like pattern in the lung fields. The contour of the heart was essentially unchanged. On both studies there was increased soft density in the upper abdomen, probably representing some splenic and possibly liver enlargement."

#### NO ATRIUM ENLARGEMENT

*Physician:* "You don't think you could say there was left atrium enlargement at all?"

*Dr. Sloan:* "No, I don't think there is anything distinctive about the pattern of enlargement. In the initial lateral view in particular the left atrial area does not seem to bulge posteriorly."

*Dr. Love:* "An electrocardiogram was obtained. It showed both high voltage, which could just be related to the age of the patient, and abnormal ST and T wave segments, which could be produced by the administration of digitalis. It does not help in the differential diagnosis of the heart disease. Febrile agglutinations were obtained, presumably before the blood cultures were returned, and these were negative. C reactive protein was reported as 4 plus. The ASO titer was 55 units.

"It is logical to detain an ASO titer if you think the patient may have acute rheumatic fever, but there is the impression—the conviction among the medical students—that an ASO titer has

something to do with diagnosing rheumatic heart disease in the inactive phase. The same idea that they have that you give the penicillin every month to prevent bacterial endocarditis. This is totally false, and it is also totally false that the ASO titer has anything to do with determining whether the valvular lesion in this patient is rheumatic or not.

"Throat culture showed alpha hemolytic streptococci and *Neisseria*. Blood cultures were obtained, and all were positive for alpha hemolytic streptococcus. Presumably this bacteremia was not produced by the pneumonia. It is possible that the pneumonia prepared the way by opening up the portal through which the alpha hemolytic streptococcus gained entry to her blood and then to the heart. Respiratory infections are one of the preceding events in the development of bacterial endocarditis, just like dental extractions or surgery on the genital urinary tract.

#### DRUG THERAPY

"In the hospital she was given penicillin, after having been tested for sensitivity. I don't know what tests were used, but she did not react adversely to the medication. She was also given streptomycin and probenecid. This was very adequate therapy for bacterial endocarditis due to an alpha hemolytic streptococcus, and she did seem to improve. She became afebrile on May 27, which was four days after admission. She probably wasn't started on the medication until two days after admission. However, on the 29th she had a sudden increase in congestive heart failure with mild hemoptysis. For the first time an aortic diastolic murmur was heard, and the thrill previously present at the apex was not felt.

"The development of an aortic diastolic murmur tells us that the disease involved the aortic valve. The development of aortic insufficiency could be caused by the presence of vegetations. A more striking possibility is that the valve had become perforated or that a cusp had been ruptured by the bacterial process. Perforated valves are rare, but they do respond to surgical treatment. A valvular prosthesis is not required. This is one of the few lesions of the aortic valve which responds to a plastic procedure. This patient was very sick, but at that time the possibility was entertained that the aortic valve should be explored. The thrill at the apex disappeared—but she might have developed an effusion, or perhaps the examiner didn't examine it in the right proper manner. Chordae tendineae of the mitral valve might have ruptured. In this case the absence of the

thrill would be associated with an increase in insufficiency, rather than a decrease.

"She was seen by cardiology consultant who recommended that she should be explored even though she was a very poor operative risk if she did not improve. If patients with bacterial endocarditis develop congestive heart failure which is not controlled by a good regimen, the prognosis is extremely poor. This patient did respond to an increase in the Digoxin, restriction of salt, and the addition of hydrodiuril to the regimen. She lost 5½ pounds in weight. There was a reticulocyte response, presumably due to control of the infection and possibly to the iron which was also given.

"Then suddenly on July 5, she died. A electrocardiogram was taken and revealed ventricular fibrillation, and she responded initially to emergency measures. The fact that she died with fibrillation suggests a number of things. One possibility would be coronary embolism. My concept is that coronary micro-embolism is common in patients with SBE, but that large emboli are uncommon; perhaps the pathologist may want to comment on that. I think we can all agree that the patient had subacute bacterial endocarditis. She had a murmur, blood culture, and a clinical picture to go with this. This involved the aortic valve and possibly also the mitral valve. There may have been a perforation or rupture of the aortic valve.

#### RHEUMATIC OR AORTIC?

"As to the type of heart disease, if there were double valvular lesions, I think that rheumatic heart disease would be an overwhelming probability. If the mitral murmur was caused by ventricular dilatation, then the aortic disease could as easily be on a congenital basis. In the lungs we expect to see evidence of chronic congestion and perhaps embolization related to the bed rest and congestive heart failure. Perhaps there will be thrombosis related to congestion of the lungs. I don't expect any surprises, unless it would be the nature of the underlying heart disease. Any other diagnoses, discussion, question or comments?"

*Physician:* "Are these murmurs compatible with a ventricular septal defect with SBE on the aortic valve in addition?"

*Dr. Love:* "Yes, I believe they are. Whether she should have been transfused is another point which might be brought out. The blood hemoglobin was 9 gm. per cent. This is not maximal support for the patient. Her hematocrit could have been raised to a more nearly normal level without increasing her blood volume appreciably

by giving packed red cells. It is not unusual for patients to die with SBE, even though the organism has been controlled by antibiotics. There was a long delay in this case between onset of the disease and the onset of the treatment. This is almost certainly the major contributing factor in the patient's death."

*Physician:* "Are you saying that this was a rheumatic or congenital lesion?"

*Dr. Love:* "Yes, exactly. I would have to bet on the rheumatic."

*Physician:* "Do you think she had pulmonary emboli?"

*Dr. Love:* "I don't see any need to make this diagnosis. The hemoptysis could be explained on the basis of congestive changes in the lung."

#### TERMINAL PATHOGENESIS

*Dr. Walter S. Gilmer, Jr.:* "In this case recognition of the nature of the pre-existing heart disease is essential if the pathogenesis and precise nature of the terminal episode are to be understood. Specifically, we have a child who at age nine had symptoms of heart disease with congestive failure and who at age 16 experienced a calamity.

"This was a well-developed and well-nourished, rather small young woman, 5 ft. tall weighing about 100 pounds. There was no jaundice, no peripheral edema, no cyanosis, and no congenital stigmata. There was a very small amount of serous fluid in the pleural and pericardial cavities, and about 100 cc. in the peritoneal cavity.

"As Dr. Love has indicated, the heart was the site of the principal, and indeed the only disease process, or processes. All other changes were secondary. It weighed 460 gm.—about 220 gm. above normal. Using this photograph of the opened heart, we will try to orient ourselves. On the left ventricular wall about 1 cm. below the aortic ring is a prominent fibrous band occupying the entire circumference of the subaortic area and involving the aortic leaflet of the mitral valve. Some chordae actually insert in this band. It was said that the little finger could not be inserted in the small aperture left by the band. It probably was little more than a cm. in diameter.

#### NECROTIC MASS

"One can identify the right anterior aortic valve which was normal. But, the left anterior and posterior valves have lost their identity, being occupied and distorted by a great conglomerate mass of friable necrotic vegetations. A few of these can be seen on the endocardium just below the valves. The mitral valve is not involved.



"So, this is a clear example of sub-aortic stenosis, a congenital lesion in which there is a persistent veil or fibrous band beneath the aortic valve, the lesion responsible for five years of symptoms, and superimposed aortic bacterial endocarditis.

"Histologically, this was a good example of the lesion once called endocarditis lenta, but with something added. There was an extensive necrotizing inflammatory lesion largely destroying the valves, extending into the ring with abscesses in the wall and even extending into the epicardial fat. There also was microscopic involvement of the fibrous band, but apparently this was a late event.

"The changes of subacute bacterial endocarditis with giant cell reaction, chronic inflammation and calcification were found, but in addition there was acute suppuration and abscess formation. Streptococci were cultured. I think it best to call this acute suppurative bacterial endocarditis. This, of course, is a well-recognized complication of sub-aortic stenosis.

"In other viscera, the changes due to congestive failure were found. The right lung weighed 270 gm., the left 250. Copious amounts of pink, frothy fluid poured from the bronchi and the cut surfaces of the lungs. There also was palpable induration of the lungs. No infarcts were seen, so the hemoptysis must be attributed to extreme congestion, a common enough symptom in cases of severe mitral stenosis.

"In the liver there was a marked degree of chronic passive congestion and also acute anoxic necrosis, the two differing only in intensity and duration. The spleen weighed 300 gm. and was a typical acute splenic tumor—acute splenitis."

*Physician:* "Now you said several things I am not clear on. The big one is, did you culture anything out of the valve?"

*Dr. Gilmer:* "The valve was not cultured. I referred to blood cultures during life."

*Dr. Herbert G. Langford:* "Well, I think a comment is deserved here. If there was an adequate description of the heart findings, we should be able to make this diagnosis of aortic stenosis."

*Dr. Gilmer:* "Let me ask you, how often do you see subaortic stenosis as a familial thing?"

*Dr. Langford:* "I can't answer that. There were three aortic cusps in here?"

*Dr. Gilmer:* "Yes, there are two cusps which were involved massively by vegetations and then one which was free. I feel that the possibility of coronary embolism was extremely good."

*Dr. Love:* "I think the moral for the students is that this was a preventable medical death. If the patient had been treated promptly she would probably be alive now."

*Dr. Harper K. Hellems:* "The other moral is that if she had a fibrous subaortic stenosis, she could have been operated on five years ago."

★★★

2500 North State St.

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## SLOGANEERING

JUVENILE DELINQUENT: Child hood.

NEUROLOGIST: Twitch doctor.

BANDAID: Scratch pad.

MATERNITY SHOP: Home of way out dresses.

SODA CLERK: Fizzician.

—Bob Peets' *Business Briefs*

# Radiologic Seminar LIII: Fixed Defects of the Gallbladder Wall

ROBERT R. SURRATT, M.D.  
Jackson, Mississippi

CAREFULLY PERFORMED gallbladder studies often reveal small rounded intraluminal defects of the gallbladder wall. Usually these defects represent benign lesions, but rarely malignant neoplasms or lesions possibly premalignant are present. Histologic study alone can differentiate benign from malignant polypoid defects.

Diagnosis requires radiographs of excellent quality. Erect or decubitus views help in separating fixed wall defects from free stones, which either sink or float in such positions. Some polypoid defects are best recorded on spot films made with compression during erect fluoroscopy. Often post fatty meal films are invaluable. Demonstration is difficult with poor gallbladder visualization, with defects below 3 mm. diameter, or if stones are also present. With the exception of adenomyomas, a preoperative roentgen tissue diagnosis cannot be made.

## TUMORS

Epithelial polyps arise from mucosal epithelium and polypoid adenomas reproduce epithelial glandular structures. Both have a vascular connective tissue stalk or base. Carcinoma in situ has been reported in this group, and they perhaps are premalignant lesions although this is sometimes questioned.

Polypoid adenocarcinoma can rarely occur as a small defect. Usually it presents a larger mass in a nonvisualized gallbladder. Chronic gallbladder disease, calculi or both are often present.

Intraluminal masses due to fibroadenoma, lipoma, neurinoma and ectopic tissue of gastric mucosa or pancreas have been reported. These are quite rare.

Adenomyomas are benign and clinically insignificant tumors which occur at or near the gallbladder fundus. They consist of an extrinsic mass of muscular and glandular tissue. Over the mass, the mucosa undergoes infolding producing a small intraluminal defect.



*Figure 1. Small fixed polypoid defect along lateral aspect of gallbladder wall, as seen on recumbant film. (Retouched for purposes of illustration.)*

Sponsored by the Mississippi Radiological Society.





Figure 2. Erect spot film view, demonstrating that the defect maintains a constant position. (Retouched for purposes of illustration.)

This radiolucent defect with the larger slight extrinsic mass defect may allow preoperative roentgen diagnosis.

#### PSEUDOTUMORS

Cholesterol polyps are the most common cause of intraluminal defects. They consist of multiple or single papillary structures containing histiocytes

filled with cholesterol products. Diffuse smaller polyps of this type produce cholesterosis or so-called strawberry gallbladder.

Inflammatory polyps are composed of inflammatory tissue without cholesterol deposition. Frequently chronic inflammatory gallbladder disease is also present.

A common defect is produced by a radiolucent stone fixed to the gallbladder wall. Unusual pseudotumors have resulted from defects produced by a tortuous arteriosclerotic vessel and a varix of the gallbladder wall.

#### SUMMARY

Polypoid gallbladder wall defects require microscopic study to exclude the presence of a malignant process. Surgical removal, therefore, of all such gallbladders seems the only method of treatment.

★★★

4531 Brook Dr.

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#### NECESSITIES OF LIFE

Asked what he had done with his fortune, the former millionaire said: "Part of it went for liquor and high priced sports cars, and part of it was spent on women. The rest I spent foolishly."



# From Archer to Archer: Two Centuries of Medical Progress

W. MONCURE DABNEY, M.D.  
Crystal Springs, Mississippi

THE BICENTENNIAL of American medicine, being observed during 1965-1968, invites attention not only to a great university but also to the pursuit and attainment of excellence of our nation's medical institutions. As the profession enters upon its third century of service, milestone achievements in the forward thrust of the science have become commonplace. There are more than 300,000 living American physicians, and by 1970, there will be 13 new medical schools in operation, raising the total in the United States to 101.

It all began on the morning of May 3, 1765, at Philadelphia, Pennsylvania. A young physician, Dr. John Morgan, just back in his native city from studies at the University of Edinburgh, met with the trustees of the College and Academy of Philadelphia. This institution, scarcely 10 years old, had been founded by Benjamin Franklin who lent his support to young Morgan's pioneering proposal that a medical school be organized.

Another institution figured prominently in the plan, because a clinical facility would also be needed. This was the Pennsylvania Hospital which had been "piously founded for the relief of the sick and miserable." Thus, the nation's first medical school was born in the shadow of the State House, also destined for a role in history when the Declaration of Independence would be signed there 11 years later. Soon, the first class matriculated.

Ten students became the first candidates for the M.B. degree, since medicine was accorded the bachelor—not a doctoral—status by the academicians. There were nine American-born colonials

and one Englishman, Potts, by name, who was to exert influence on the decision determining the first medical graduate in the new world. The nine Americans were named Archer, Carroll, Duffield, Elmer, Fullerton, Jackson, Lawrence, Telton, and Way.

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*During 1965-68, American Medicine and the University of Pennsylvania commemorate the 200th anniversary of medical education in the United States. The little-known story of the nation's first medical graduate, Dr. John Archer, the great, great grandfather of a past president of the association, discloses that but for a successful rebellion among members of the first class of medical graduates, Princeton University would have been the mother institution of the profession.*

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The late Dr. J. M. T. Finney of Princeton University related the circumstances surrounding the first commencement, and he places the narrative in the pre-Revolutionary frame of reference, giving the story a dramatic flair.

The year was 1768, a scant eight years before the shot heard around the world was fired in Massachusetts. Burke's "fierce spirit of liberty" was burning throughout civilized society. France had lost Canada, Spain had lost Florida, but Britain maintained its oppressive hegemony over the colonies to acquire a set of problems that would soon lose it more than it had gained.

The late Thomas A. Hendricks, a medical history buff of considerable ability, wrote that "these medical students, following the proclivities of all



students of all times, participated in dialogues" of the day. The colonies were caught up in a great debate over the Stamp Act, the cruel Acts of Trade, and taxation without representation. The issues were discussed from the pulpit, in the press, in a flood of pamphlets, and over the tankards in the taverns. It was no small wonder that Potts, by accident of birth, was about to cause an academic furor.

As graduation day approached, a controversy over who should receive the first medical degree in America became apparent. On one side was the medical school faculty and on the other were the nine Americans. And poor Potts, the Englishman, was the cause of it all.

### THE ADAMANT FACULTY

The faculty, all of whom had received their medical education in England, were determined to award the first diploma to Potts. The Americans

protested, but the faculty would not yield. Worse yet, all 10 candidates had passed their final examinations, so there was no contesting their qualifications for the M.B. degree.

### ARCHER IS CHOSEN

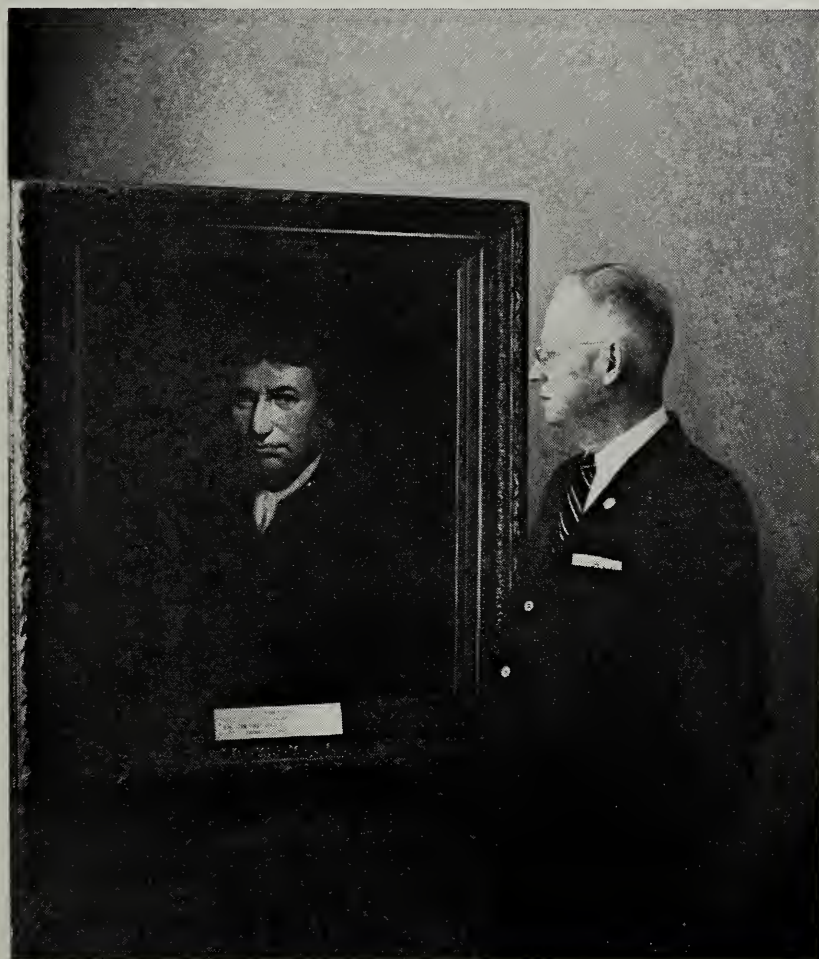
Rising as a single man, the nine Americans called on the faculty so loyal to the British crown and demanded certificates of completion, stating their intention of presenting these to the faculty of Princeton University and requesting medical diplomas from that institution. Dr. Finney wrote that "the idea of losing nine out of 10 members of this, their first graduating class, was a little more than the faculty could stand, so they agreed to let the young rebels arrange the matter among themselves."

The Americans decided upon a modified alphabetical order for the awarding of diplomas in that they generously gave Potts, the Englishman, the fourth place. A strict alphabetical order would have made him the eighth graduate. A debate, a student uprising, and an unyielding determination that an American—not an Englishman—would be the first medical graduate resulted in Dr. John Archer's becoming the first physician graduated from the University of Pennsylvania.

But for the furor and successful rebellion, Princeton University might have been the mother institution of American medicine.

John Archer was born May 5, 1741, in Hartford County, Maryland. The fortunate beneficiary of the best education opportunity, he attended the Academy at Nottingham in Cecil County where he first met Benjamin Rush who was to become his lifelong friend, a signer of the Declaration of Independence, and a much better known physician, actually the father of psychiatry in America. Both Archer and Rush entered Princeton from which the former was graduated with the M.A. degree.

Archer entered Princeton Theological Seminary and successfully completed his studies to become a minister of the Presbyterian Church. His active ministry was short lived, because he



*With a "stern and forbidding" countenance, Dr. John Archer, the first medical graduate in America, looks from his portrait at Dr. John G. Archer, his fifth direct lineal descendant. Scene is the University of Pennsylvania School of Medicine.*

was obliged to abandon the pulpit because of a throat affectation. It was then that he made his decision to direct himself into another field of service in the study of medicine, and he entered Dr. Morgan's first class with the founding of the school at Philadelphia. The M.B. degree was conferred upon him and his nine classmates June 21, 1768.

Medical practice, upon which he had entered in his native Harford County near the present village of Churchville, Md., was not new to Dr. Archer. Between his second and third courses of lectures at Philadelphia, he had practiced in New Castle County, Delaware.

The fury of the revolutionary struggle was reaching a higher pitch, and Dr. Archer was no less devoted to the cause of liberty than he was to his profession. When the war came, he was commissioned a captain and he commanded a company of Maryland volunteers. In this rare extension of his versatility, it might be observed that here is probably a unique instance in the annals of military history where a tactical commander was his own medical officer.

### CONGRESSMAN ARCHER

As if the attainment of baccalaureate, master's, and double doctoral mantles, the active practice of two professions, and active service as an officer in the War of Independence were not enough, Dr. Archer turned his attention and talent to public service. He was elected to the Congress from Maryland in 1800 and re-elected for a second term in 1802. He is said to have served with distinction. While in Washington, he was frequently called into consultation by physicians there.

Soon after retirement from politics, he was disabled by rheumatism and remained a virtual invalid until the time of his death September 28, 1810, at 70 years of age. Faithful to his Hippocratic Oath, he had constantly a number of medical students from Maryland and adjacent states in his home, Medical Hall, freely giving instruction in the art and science he loved so well.

Dr. Archer was the father of nine children, six sons and three daughters. Only the youngest son, Stevenson, failed to keep the medical tradition; the other five were physicians.

Finney described this remarkable pioneer as "a man about medium height and possessed (of) great physical strength with a large share of both moral and physical courage," probably an equally remarkable understatement in the light of his achievements. The portrait of Dr. Archer hanging at the University of Pennsylvania School

of Medicine confirms another Finney description of his having "great breadth of intellect and a large store of knowledge, his countenance rather stern and forbidding, but his heart very kind."

The great, great grandson of this astonishing man was a major participant in the bicentennial celebration at Philadelphia on May 20, 1966. Dr. John George Archer, a 1916 graduate of the University of Pennsylvania School of Medicine, delivered the principal address on his illustrious predecessor before the John Archer Society with a galaxy of medicine's honored and famous in attendance.

### GREAT, GREAT GRANDSON

A native of Greenville, the fifth generation Archer received his premedical education at Vanderbilt University before entering medical school at Philadelphia. Following completion of his internship at Episcopal Hospital, he was commissioned as a medical officer in the army and served in France with the A.E.F.

Discharged from service with the grade of captain, Dr. Archer continued his training at Cornell University School of Medicine, at Barnes Hospital in St. Louis, and at Tulane in New Orleans, all in internal medicine. He is a Fellow of the American College of Physicians and a past governor of the college. After many years of service in key posts of the state medical association, including membership on the Board of Trustees, he served as president during 1963-64.

Over the span of two centuries with a lineally descended Archer graduating at the sesquicentennial milestone, the University of Pennsylvania School of Medicine has been a powerful influence on the shape and scope of medical education in the United States. Its medical alumni have numbered 20,000, and they have helped to found 29 other medical schools, one of the goals sought by Dr. John Morgan in his inaugural address entitled "Discourse Upon the Institution of Medical Schools in America."

### THE 300,000TH PHYSICIAN

One hundred ninety-eight years after John Archer received his medical diploma at Philadelphia, a 29 year old Alva, Oklahoma, student, Jerry Dean Leu, stepped forward on June 12 to become the 300,000th living doctor of medicine in the United States as he was graduated from the University of Oklahoma School of Medicine.

Drs. Morgan, Rush, and Archer would be astonished if they could see the fruition of their dreams today. Since 1960, the physician population in the



United States has grown 20 per cent while the total population has grown 10 per cent. The fund of knowledge has increased a thousand-fold in the last half century as the science presses forward from horizon to horizon. By 1975 when there will probably be 107 medical schools in operation, the American physician population shall have in-

creased more than 50 per cent over the 1960 level, and there will be more than 30,000 in medical faculties.

The successes and the fulfillment of the past underscore the significance of the bicentennial; the promises of the future mark it as historic.

★★★

## TYPECASTING

Psychiatr<sub>△</sub>



parano*id*

OEDI<sub>PL</sub><sub>A</sub>



**PSYCHOANALYSIS**

symptom

iNFERiORiTY

**TTC**

Freudians lip

tranquilizer

**anx!ety**

inhibition

**PHOBIA**

castrat-

—Smith Kline & French *Psychiatric Reporter*

# new

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pains in the back of my head.”**

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in tension headache  
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**Precautions:** Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side Effects:** Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.



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# Massive Strychnine Poisoning: A Successful Treatment

MILAM S. COTTEN, M.D., and DEWEY H. LANE, M.D.  
Moss Point and Pascagoula, Mississippi

REPORTS OF DEATH from strychnine poisoning with documented dosages are uncommon. This particular case is presented for interest in the belief that it represents the highest documented dosage of strychnine poisoning successfully treated.

The following pharmacological information is extracted from Goodman and Gilman.<sup>1</sup> Strychnine is the principal alkaloid present in "nux vomica," the seeds of a tree that is native to India. The outstanding action of strychnine is a stimulation of the central nervous system. Strychnine is readily absorbed from the GI tract and readily destroyed in the body; however, approximately 20 per cent escapes to the urine starting a few minutes after ingestion and is practically complete in 24 hours. Death is due to medullary paralysis resulting not only from excessive stimulation to the medulla but also from the anoxia resulting from the apnea from the many typical seizures. The mean fatal dose is 100 mg. to 120 mg.;<sup>2</sup> however, persons taking dosages up to 500 mg.<sup>3</sup> have survived with proper treatment.

Treatment is directed toward (a) preventing convulsions and (b) supporting respiration. Swissman and Jacoby<sup>3</sup> and Arena<sup>4</sup> mention the value of muscle relaxants (D-Tubocurarine, succinylcholine and mephenesin) in the treatment of strychnine poisoning. Rae and Truscott<sup>5</sup> reported a successful treatment of strychnine poisoning utilizing intermittent positive-pressure respiration and muscular relaxants.

This particular case is an attempted suicide in a 52-year-old white male, divorcee, who ingested at least 570 mg. (four to five times a mean lethal dose) of strychnine in the form of a white liquid. He was brought into the emergency room via an ambulance about 30 minutes after ingestion at which time he was in status epilepticus, comatose, cyanotic and without heart-beat or respiration.

The status epilepticus was treated with intravenous (IV) Amytal while external cardiac resuscitation with external cardiac massage, intracardiac (IC) Adrenalin, IC calcium chloride, IV sodium bicarbonate, IV Levophed, endotracheal intubation followed by tracheostomy and respiration was performed using a positive phase medical respirator (Bird MARK 7). Gastric lavage with potassium permanganate followed by universal antidote (magnesium oxide, 1 part; tannic acid, 1 part, and activated charcoal, 2 parts) was performed during the resuscitation.

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*An interesting case of attempted suicidal strychnine poisoning is presented. The case is remarkable since it represents apparently the highest documented dosage of strychnine poisoning to be successfully treated. The patient required two successful cardiac resuscitative measures. The value of aggressive treatment utilizing anticonvulsants, muscular relaxants, hypothermia, tracheostomy, and mechanical respiration is demonstrated thereby accomplishing the therapeutic goals of preventing convulsions and supporting respiration.*

---

Examination on admission revealed a well-developed, well-nourished, slightly thin white male in moribund condition with pupils fixed and dilated. Examination of the heart revealed no audible activity and no palpable pulse; however, because of the nature of the emergency, an EKG could not be performed prior to institution of cardiac resuscitation. The abdomen was normal to palpation, and without masses. The genitalia had



a hard, weeping lesion of the glans penis with a firm mass in the left scrotum. Lower extremities were normal except rigid. Upper extremities were rigid and revealed the left hand and forearm to be in a splint and bandage.

There was no evidence of external trauma and the mouth did not reveal any residual liquid consistent with the "white liquid" of strychnine that he had ingested. The patient was unknown to anyone in the emergency room or the ambulance and did not have anyone accompanying him. A lady had phoned stating that the man had consumed the liquid and threatened her life but before he could commit the alleged homicidal and suicidal attempt he went into the symptomatology of strychnine poisoning, namely, the convulsions, and became unconscious.

After apparently successful resuscitation with the tracheostomy in place and respiration being controlled by the positive phase medical respirator and the status epilepticus under control, the patient was transferred from the emergency room to the nursing floor with a private duty nurse. Five hours after admission he experienced another cardiac arrest (no blood pressure or pulse for 15 minutes) that responded to external cardiac massage administered by the pathologist who had answered the call for "any doctor in the house."

### THERAPEUTIC MEASURES

Along with the standard recommended treatment, we added the mechanical respirator to breathe for him, hypothermia (he was placed on an ice mattress to maintain a body temperature of 93 F. [34 C.] for three days) and Mannitol to reduce cerebral edema, antibiotics to prevent infections and Levophed to maintain blood pressure and utilized barbiturates, Dilantin and Robaxin to control the convulsions.

During the first 24 hours the patient received Amytal IV or IM (intramuscular), 20¾ grains (1,245 mg.). In fact, this was administered within the first five hours after admission. He received Luminal IV or IM, 13¾ grains (825 mg.) of which 10¾ grains were administered the first 12 hours. Dilantin, 500 mg. IM was given the first 24 hours of which 300 mg. were administered the first 12 hours. Robaxin, 5 gm., Demerol, 25 mg. and Thorazine, 150 mg. were also administered within the first 24 hours.

The second 24 hours the patient received 14 grains of Luminal, 600 mg. of Dilantin, 5 gm. of Robaxin, 150 mg. of Thorazine, 50 cc. of a 25 per cent solution of Mannitol. The third 24 hours the patient required only 4 grains of Luminal plus

500 mg. of Dilantin and 125 mg. of Thorazine. The barbiturates were gradually decreased to 2 grains (120 mg.) a day and discontinued on the sixth hospital day. The Dilantin was gradually decreased to 200 mg. a day and discontinued on the 14th hospital day.

### EARLY CLINICAL COURSE

During the first three day period he was completely comatose, responding only minimally to painful stimuli. At the time he was brought to the emergency room he had the fixed dilated pupils bilaterally; however, within 12 hours pupillary function had returned to normal. By the end of the third day he had become more responsive, moving voluntarily his left leg and to some extent his right leg and moving his right arm freely. However, he continued to keep his head turned to the left and was unable to respond to any spoken commands. By the end of the fourth day the patient was responding somewhat to spoken commands and could vocalize a few words and the tracheostomy tube was closed.

From this point on he showed gradual, steady improvement. He had amnesia from the recent events and did not remember anything concerning his ingestion of strychnine or any of the days preceding that time. He had the superficial injuries of his left arm and hand which had been treated by doctors elsewhere and there was no evidence of fracture on x-ray. His electrocardiographic changes initially showed evidence of myocardial injury with incomplete AV block and prolonged PR interval and prolongation of QRS with depression in the ST segment on admission after the initial cardiac resuscitation. These tracings gradually returned toward normal; however, the patient still had definite evidence of myocardial disease. While in the hospital the biopsy of the lesion of the glans penis revealed epidermoid carcinoma of the glans penis, Grade II, invasive.

### CALCULATION OF DOSAGE

Documentation of the dosage was determined by submitting a urine specimen to the Bio-Science Laboratories,<sup>6</sup> with the subsequent report of "alkaloid strychnine, 10 mg. per cent." A total of 1,140 ml. of urine was voided spontaneously (catheterization was not possible initially due to the lesion involving the glans penis and this was accomplished the next day by filiform catheterization followed by Foley) 12 hours after admission and was, therefore, approximately 12 hours after ingestion of strychnine. With a concentration of 10 mg. per cent in a total urine volume of 1,140 ml. a total of

114 mg. would have been excreted which represents 20 per cent of the ingested dose;<sup>1</sup> therefore, five times 114 equals 570 mg. ingested. This is a minimal dosage since other textbooks give the figure 10 to 20 per cent is excreted in the urine and also the fact that excretion continues for 24 hours after ingestion. The mean fatal dose is 100 mg. to 120 mg.; therefore, this represents four to five times a mean fatal dose.

The patient was transferred on the 22nd hospital day to the VA Hospital in Biloxi, Miss., for further follow-up and treatment. Our final diagnoses on this particular patient were strychnine poisoning, self-induced, with two cardiac arrests; with the following operations or procedures: (1) two successful external cardiac resuscitations, (2) tracheostomy, (3) biopsy of the glans penis, (4) spinal tap. Secondary diagnoses included pneumonia, reactive VDRL and TPI, probable left testicular carcinoma, carcinoma of the glans penis, squamous type, and no neurological residual or deficit, except amnesia.

#### COMMENT

In essence then, the two aims of treatment were (a) to prevent convulsions which was accomplished with massive dosages of barbiturates, Dilantin, and Robaxin, and (b) to support respiration which was performed initially by the endotracheal tube followed by tracheostomy to which a positive phase medical respirator was attached and actually breathed for the patient.

This is in agreement and substantiates the case reported by Rae and Truscott<sup>5</sup> and disregards the concept of minimal stimulation to the patient. By control of the respiration with the tracheostomy and respirator one can thereby administer massive dosages of barbiturates and relaxants and achieve the desired end of protection of the medulla and

prevention of convulsions. Mannitol and hypothermia were administered to prevent cerebral edema. Levophed was administered to maintain the blood pressure, and the two successful closed chest resuscitations were administered to correct the cardiac arrests.

#### SUMMARY

A case of a strychnine suicidal attempt is presented in the belief that it represents the highest documented dosage of strychnine poisoning successfully treated.

This case emphasizes the need for establishing a tracheostomy through which to control respiration with an automatic respirator and thereby enable one to safely administer massive dosages of anticonvulsants to accomplish the therapeutic goals of (a) preventing convulsions and (b) supporting respiration.

★★★

605 Park St.  
(Dr. Cotten)

*C. L. Ezell, M.D., performed the second successful cardiac resuscitation.*

*Robert Carter, M.D., performed the catheterization and glans penis biopsy.*

#### REFERENCES

1. Goodman, L. S., and Gilman, A. (eds.): *The Pharmacological Basis of Therapeutics*, ed. 3, New York, The Macmillan Company, 1965.
2. Gonzales, T. A.; Vance, M.; Helpert, M.; and Umberger, C. J. (eds.): *Legal Medicine Pathology and Toxicology*, ed. 2, New York, Appleton-Century-Crofts, Inc., 1954.
3. Swissman, N., and Jacoby, J.: Strychnine Poisoning and Its Treatment, *Clin. Phar. and Ther.* 136-140 (Jan. and Feb.) 1964.
4. Arena, J. M.: Report from the Duke University Poison Control Center, North Carolina M. J. 480-481 (Oct.) 1962.
5. Rae, J. L., and Truscott, M. S.: Report of a Case of Strychnine Poisoning Treated by Intermittent Positive-Pressure Respiration and Relaxants, *M. J. Australia* 764-765 (May 16) 1964.
6. Bio-Science Laboratories, 12330 Santa Monica Blvd., Los Angeles, Calif. 90025.

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#### CAREER DUFFER

Golf is like business: You try hard to make the green and end up in the hole.





## MEETINGS

### NATIONAL AND REGIONAL

American Medical Association, Clinical Convention, Nov. 28-Dec. 1, 1966, Las Vegas. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago, Ill. 60610.

American Academy of General Practice, Oct. 8-13, 1966, Boston. Mr. Mac F. Cahal, Executive Director, Volker Blvd. at Brookside, Kansas City, Mo. 64112.

International College of Surgeons, 15th Biennial Congress, Oct. 1-4, 1966, Mexico City, D. F., Mexico. Mr. Stanley Henwood, Executive Director, 1516 Lake Shore Drive, Chicago, Ill. 60610.

Southern Medical Association, Nov. 14-17, 1966, Washington. Mr. Robert F. Butts, Executive Director, 2601 Highland Ave., Birmingham, Ala. 35205.

### STATE AND LOCAL

Mississippi State Medical Association, May 15-18, 1967, Biloxi. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson.

Amite-Wilkinson Counties Medical Society, Third Monday March, June, September, December. S. E. Field, Jr., Centreville, Secretary.

Central Medical Society, First Tuesday, January, March, May, September, November, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. James R. Cavett, Jr., Suite B-6, Medical Arts Building, Jackson, Secretary.

Claiborne County Medical Society, First Monday January and July, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Port Gibson, Secretary.

Clarksdale and Six Counties Medical Society, Third Wednesday March and First Wednesday November, 2:00 p.m., Clarksdale. Robert L. Forman, Coahoma County Hospital, Clarksdale, Secretary.

Coast Counties Medical Society, First or Second Wednesday, January, March, May, September, and November. C. D. Taylor, Jr., 113 Davis Ave., Pass Christian, Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Secretary.

DeSoto County Medical Society, Second Thursday, January, April, July, and October, 1:00 p.m., Mary's Restaurant, Hernando. Malcolm D. Baxter, Jr., McIntosh-Baxter Clinic, Hernando, Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Secretary.

Homochitto Valley Medical Society, First Tuesday Quarterly, Jefferson Davis Memorial Hospital, Natchez. Walter T. Colbert, Jefferson Davis Memorial Hospital, Natchez, Secretary.

North Central District Medical Society, Third Wednesday March, June, September, and December. William E. Riecken, Jr., P. O. Box 831, Kosciusko, Secretary.

Northeast Mississippi Medical Society, Second Tuesday, March, June, September, and December, Corinth. S. Jay McDuffie, Nettleton, Secretary.

North Mississippi Medical Society, First Thursday, April and October, Oxford. M. Beckett Howorth, Jr., 2200 S. Lamar Blvd., Oxford, Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. Joseph C. Griffing, Lucius Olen Crosby Memorial Hospital, Picayune, Secretary.

Prairie Medical Society, Second Tuesday, March, June, September, December. J. M. Griffith, 824 Second Ave. North, Columbus, Secretary.

South Central Mississippi Medical Society, Second Tuesday March, June, September, and December. Julian T. Janes, Jr., 304 Clark, McComb, Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. John E. Green, Green Clinic, Hattiesburg, Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg. Patrick G. McLain, 1301 Washington St., Vicksburg, Secretary.



# The President Speaking

‘True Perspective’

JAMES T. THOMPSON, M.D.

Moss Point, Mississippi

FEW SUBJECTS have been discussed with greater fervor than the issue of pesticides and agricultural chemicals as their use relates to environmental health of the American people. A number of ill effects are quite obvious: Inhalation or ingestion of some of the agents themselves can and do produce sickness and even death. Effects on game and fish are easily documented. Very properly, the entire issue has been the subject of discussion, debate, and research.

A committee of the United States Senate has just concluded consideration of this issue and states that “more information is needed in the field but (that) scientific data now available does not indicate human health hazards of sufficient significance to warrant drastic curbs on the use of pesticides.” Of perhaps greater significance in the report is the statement qualifying the broader view: “The magnitude of the future risk is uncertain in many important areas” and that “while some gloomy prophecies that have been raised could not be supported by hard scientific fact, it is also true that science could not and still cannot prove that some of these prophecies are untenable.”

The question of how much harm may seem more difficult than ever before in that even the experts are quibbling. What is important is serious review of environmental health programs, forward strides in pharmacology, development of safer pesticides, and good hygienic practices among those who use them in the production of food and fiber. Physicians have played a key role in this aspect of human health and preventive medicine, and they will continue to do so.

As with other pressing and urgent health questions of the day, serious inquiry, the maintaining of a true scientific perspective, and plain common sense are clearly indicated in finding the answers to pesticides and health. ★★★





## Ethical Drug Making: Guilty Until Proven Innocent

### I

INTRODUCTION OF NEW DRUG entities on the ethical pharmaceutical market during the first six months of 1966 was the lowest in 25 years. For those who may believe that the Kefauver-Harris Amendments of 1962 and the Drug Abuse Control Amendments of 1965 are not having a telling effect on the development and marketing of new drugs, the record speaks out. More than ever before, research activity within the ethical drug manufacturing industry is at an all-time high point, but product introductions are down.

Paul de Haen, the respected New York drug industry consultant, reports that only four new single chemical entities were approved by the Food and Drug Administration for marketing during the first half of 1966. This contrasts sharply with 14 new entities during the same period in 1965 and 24 introduced five years ago. The 1966 introductions include only a local anesthetic, an antileukemic, a topical antibiotic, and an ingredient in an anovulatory product.

Among other January-June introductions were 39 new compounds and dosage forms, also showing a decline over preceding years. For the first half of 1965, there were 55 such offerings and 154 for the same period five years ago. All told,

it is a story for which there are many interpretations, but none is particularly happy.

### II

The American pharmaceutical industry is healthy and viable. It pays its own way in discovering and developing the life-saving products it markets. In fact, the drug makers lead all other industries in that they pay 98 per cent of their research costs, as opposed, for example, to the aerospace industry where research is better than 90 per cent government-financed. Although a favorite target for some consumer-oriented groups as to profits, the drug makers earn about the same return as any other aggressively managed business.

It has been observed that some Americans object to spending for health care and drugs for three reasons: They are first buying something they do not want. Second, they are making expenditures on something which they could not plan. Third, they are spending for something that denies them a more pleasurable expenditure, for after all, who wouldn't rather buy a new outboard motor than have his gallbladder taken out?

So in this context, the pharmaceutical manufacturing industry isn't selling the steak or the sizzle; it is offering products of vital importance

## EDITORIALS / Continued

for the benefit of those who are not their real customers and who often know neither the name of the product nor the identity of its maker. The fact that \$15 worth of antibiotics can cure the same pneumonia that would have been fatal a generation ago is appreciated far more by physicians than by their patients. And since these products are not—and should not be—advertised to the public, the task of communicating the essential role of the drug manufacturer is made all the more difficult.

### III

Since 1960, the federal government has been building a network of controls over the pharmaceutical industry. First, there were the Kefauver investigations. Then came the amendments of 1962 requiring the demonstration of safety and efficacy. Last year, under the cloak of regulating illicit traffic in the amphetamines and barbiturates, the controls were effectively extended to a broad segment of the ataractic agents and sedatives on the argument that they "have a potential for abuse." More recently, the voluble, tireless food and drug commissioner has ordered the testing of more than 4,000 drug products which have been on the market for as long as 10 years.

Some drug companies report that they have been required to submit documentation on a new agent or compound to the extent of 20,000 pages by FDA. There are harsh requirements as to package insert information and advertising copy in purely professional journals. One wag said that this would be a terrible way to run a railroad, and it's not too pleasant for many drug makers, either.

The record within the industry speaks well, and the confidence which the ethical drug houses have earned within the world scientific community is well merited. The drug makers have given wholehearted support to regulation in the control of prescription items to the end that only those for whom they are properly prescribed may receive them. They have no wish to market an unsafe or ineffective product, because that would be the quickest road to ruin.

### IV

The decline in new and original chemical entities in the ethical drug field is really not a sign of regression in the science of pharmacology. Frankly, it is a sign of the times and a story of more and more control. A prominent medical editor observed with tongue in cheek that it's a good

thing digitalis was discovered and marketed years ago. Under the present climate, he continued, no such agent with such potentially violent side-effects would stand a chance of FDA approval.

The JOURNAL has previously questioned whether the proliferation of controls over the making and marketing of ethical pharmaceuticals is a measure of wisdom or a measure of haste. The answers coming in seem to compound the problem rather than clarify it. As with anything else, excesses may be worse than no regulation at all. And all these questions are timely and valid, deserving of serious consideration for an equally serious purpose.—R.B.K.

## M.D.'s: RSVP, PDQ!

It can't happen here, some seem to think, but the sad fact is that it not only can but does. Consider these datelined news leads:

—St. Petersburg, Fla.—Hurricane Alma struck the Tampa-St. Petersburg bay area with 93 m.p.h. winds, bringing slashing rains and dangerous tides, hitting a population center of 1.5 million.

—Chicago, Ill.—A tornado swept through suburban Chicago leaving dead and injured amid scores of homeless.



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*"Last night was some sort of record for house calls, wasn't it, dear?"*



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## EDITORIALS / Continued

—Topeka, Kans.—Slashing a half-mile wide swath, the killer tornado hit the state capital killing 11, injuring 452, and leaving hundreds of homes and commercial buildings heavily damaged.

—Jackson, Miss.—Fifty-three are dead and 500 are injured in the wake of the tornado which raked the southwestern part of the city.

Add to these weather-related disasters such tragic occurrences as hotel fires, factory explosions, train wrecks, airline crashes, earthquakes and all the varied furies of nature which can and do happen, and there's ample reason to appreciate the need for disaster medical care plans.

Mass casualty care is almost a new discipline in medicine, and its chief components are coordination, mobilization, and full utilization of medical facilities. Leaders in this vital service sometimes observe that it is difficult to interest every member of the health care team in disaster care planning because of the remote possibility of the plan being needed. But the record is much better than the infrequent complaints might indicate.

Studies by the American Medical Association show that more than 700 local medical societies have viable disaster care plans, and each is supported by its state medical association in this endeavor. And where a local society has been called to function in time of disaster, every one has rendered superb and outstanding service.

Although preparation to meet disasters may be dull and wearisome, it is an investment of time and effort paying the highest possible dividend. Testimonials to this effect are readily available from St. Petersburg, suburban Chicago, Topeka, and Jackson.—R.B.K.

## There Ain't No Free Lunch!

American businessmen have questioned Fannie Mae's virtue and chastity. She is not, it should be hastily added, a lady of the evening, but rather the Federal National Mortgage Association, not too affectionately dubbed Fannie Mae by business and industry. She is busily engaged in selling off government loans to private finance under the controversial Sales Participation Act passed by the 89th Congress.

In a nationwide poll conducted by the National Federation of Independent Business, the largest

membership organization representing businessmen in the United States, independent proprietors opposed the Sales Participation Act by 62 per cent. Only 29 per cent supported it, and 9 per cent had no opinion.

The sell-off authority can and does affect health care, if only indirectly through the factoring of government loans for construction of medical facilities. The new act will hardly help the already-squeezed mortgage market which has resulted in mounting unemployment and a reduction of operations in the construction industry.

Incredibly, Fannie Mae is offering 5.75 per cent interest on federally guaranteed loans maturing in 1968 through 1971. This is undoubtedly the highest interest rate ever paid by the U. S. government, meaning the taxpayers.

But there's more: Under Federal Reserve regulations, banks are forbidden to pay more than 5.5 per cent interest on very large certificates of deposit. The Sales Participation Act thereby puts private banks at a competitive disadvantage in attracting large depositors. Worse yet, it's all at the expense of the taxpayers. This can mean that a nursing home bed must cost more, so the patient must pay, too.

It's only a note in passing, but the Sales Participation Act is another documentation of the ageless axiom that there ain't no free lunch.—R.B.K.



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*"That's the last time I'll perform a tonsillectomy on a fire-eater!"*



WHAT'S THE  
COMMON  
DENOMINATOR? ... IRON



In fact, there's as much iron...250 mg.  
...in a 5 cc. ampul of Imferon (iron dextran  
injection) as in a pint of whole blood.  
When iron deficient patients are intolerant  
of oral iron...or orally administered iron  
proves ineffective or impractical...or if  
the patient cannot be relied upon to take oral  
iron as prescribed, Imferon (iron dextran  
injection) dependably increases hemoglobin  
and rapidly replenishes iron reserves.

## IMFERON® (iron dextran injection)

**IN BRIEF: ACTION AND USES:** A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

**COMPOSITION:** Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

**ADMINISTRATION AND DOSAGE:** Dosage, based upon body weight and Gm. Hb/100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. Initial test doses are advisable. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

**SIDE EFFECTS:** Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylatoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache and fever have occasionally been reported.

**PRECAUTIONS:** If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

**CONTRAINDICATIONS:** Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only it is contraindicated in other anemias.

**CARCINOGENICITY POTENTIAL:** Using relatively massive doses. Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

**SUPPLIED:** 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

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## PERSONALS

WILLIAM J. CARR, JR., has announced his association with JAMES A. SHEFFIELD in practice limited to pediatrics at 1016 Pass Road, Gulfport.

ROLAND B. ROBERTSON, JR., has become associated with WILLIAM L. CARTER of 1301-20th Ave., Meridian, in the practice of internal medicine.

M. EARL MCRAE has announced the opening of his office at Walnut Grove.

DAVID M. OWEN has joined the staff of the Hattiesburg Clinic where he will limit his practice to internal medicine.

L. VAUGHN RUSH, JR., is now associated with the Rush Medical Group at Meridian where he will limit his practice to general, thoracic, and peripheral vascular surgery.

A. JACK STACY, JR., of Tupelo, has announced the association of OTTIS G. BALL in the practice of radiology.

JAMES H. SWARTZFAGER of Laurel has been appointed a clinical fellow in allergy at the National Jewish Hospital in Denver. Prior to accepting the fellowship, he had practiced 25 years. The Denver institution is a free care, nonsectarian chest disease center.

R. FASER TRIPLETT has become associated with WILFRED Q. COLE of Jackson in practice limited to allergic diseases in children.

JAMES C. WAITES has been elected vice president of the Laurel Exchange Club.

HAROLD H. WEBB has joined the Simmons Clinic at Jackson where the practice of all members is limited to obstetrics and gynecology. Dr. Webb received his premedical education at Louisiana State University and his M.D. degree from the University of Mississippi School of Medicine where he also received his postgraduate training. Other members of the clinic are Drs. WALTER H. SIMMONS, ROSS F. BASS, JOHN T. KITCHINGS, and WILLIAM S. COOK.

## NEXT MONTH IN THE JOURNAL

October marks another significant first for the JOURNAL when a special issue on nuclear medicine is scheduled for publication. Five original essays, presented before the Symposium on Nuclear Medicine at the 98th Annual Session, heavily illustrated, will be included.

Dr. George V. Taplin of UCLA reports original investigation on the use of isotopes in diagnosis, and Dr. Paul V. Harper of the University of Chicago discusses their use in therapy.

Dr. H. D. Bruner of the Atomic Energy Commission writes on the role of AEC in biomedical research, while Dr. Gould A. Andrews of the Oak Ridge Institute of Nuclear Studies examines problems of treatment in radiation injury.


Dr. Everett Crawford, 1965-66 president, looks at radiation as the inherent factor in our environment. Usual monthly features, the CPC and radiologic seminar plus news, literature reviews, personals, and editorials, too.



## DEATHS

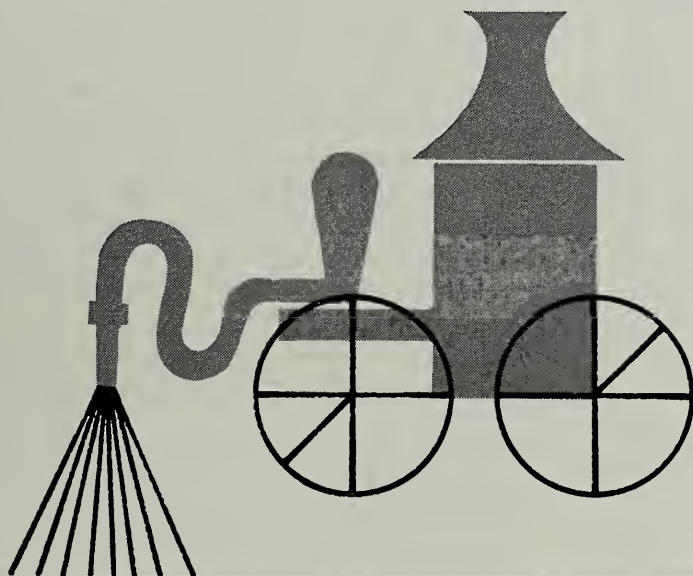
GUNTER, GEORGE OXFORD, Gulfport. M.D., Emory University School of Medicine, Emory University, Ga., 1925; died May 3, 1966, aged 93.

JACKSON, JAMES WORD, Aberdeen. M.D., University of Tennessee College of Medicine, Memphis, 1924; interned, Memphis General Hospital, Tenn., one year; died May 19, 1966, aged 68.

 LIPSCOMB, JAMES WALTON, JR., Jackson. M.D., University of Tennessee College of Medicine, Memphis, 1929; interned, Hillman Hospital, Birmingham, Ala., McLeod Infirmary, Florence, S. C., and Memorial Hospital, New York City, N. Y.; residency, Jamaica Hospital, New York City, N. Y.; fellow, American College of Surgeons; member, Southeastern Surgical Congress, the Society of Abdominal Surgeons, and Southern Medical Association; died July 11, 1966, aged 61.



**SAVES  
LIVES  
SAVES  
MONEY  
WASTES  
WATER**



METAHYDRIN (trichlormethiazide) is prescribed by physicians because it not only approximates the diuretic efficacy of parenteral meralluride injection . . . but, *it is the least expensive of all "brand-name" thiazides.* Therefore, when you prescribe METAHYDRIN (trichlormethiazide) your patients receive the thiazide diuretic that removes a little more salt and water than earlier thiazides, with relatively less loss of potassium . . . and, it's therapy they can more easily afford . . . *only pennies a day.*

## **METAHYDRIN<sup>®</sup>** (trichlormethiazide) oral diuretic

**Dosage:** One 2 or 4 mg. tablet once or twice daily.

**Precautions:** As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

**Side Effects:** Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have occasionally been noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by the administration of thiazides.

**Contraindications:** Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

**How Supplied:** Bottles of 100 and 1000 tablets.

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## NEW MEMBERS

Component medical societies of the Mississippi State Medical Association reported elections of no new members during the period July 1-31, 1966.

## State Morbidity Reported Through July 22

The Mississippi State Board of Health reports the following occurrence of morbidity for 1966 through the 29th week of the year, ending July 22. Case totals are shown opposite the disease condition.

Tuberculosis, pul. ....	497
Tuberculosis, O.F. ....	32
Dysentary, bac. ....	32
Salmonella, inf. ....	18
Diphtheria ....	3
Meningococcal inf. ....	14
Meningitis, O.F. ....	45
Mononucleosis, inf. ....	24
Myelitis ....	4
Encephalitis, inf. ....	7
Hepatitis, inf. ....	186
Meningococcemia ....	4
Helminthic infections	
Hookworm ....	482
Ascariasis ....	257
Strongyloides ....	43
Taeniasis ....	19
Streptococcus infections	
Strep throat ....	2,453
Scarlet fever ....	39
Mumps ....	255
Measles ....	958
Influenza ....	805
Chickenpox ....	222
Syphilis	
Early ....	399
Late ....	91
Gonorrhea ....	2,650
Rabies in animals	
Bats ....	3

## Hospital Costs Are Up 9 Per Cent in 1965

Hospital expense per patient day in the nation's short-term hospitals increased by \$3.90, or 9 per cent, during the past year to a record \$44.48, it was reported by Dr. Edwin L. Crosby, director of the American Hospital Association.

For the 5,736 nonfederal short-term general hospitals (usually referred to as community hospitals) the AHA statistical survey shows a \$798 million increase in total expenses in the last year for a new high of \$9.15 billion. Of this total, \$5.64 billion was paid out in wages and salaries, an increase of \$493 million over the previous reporting year. The nation's community hospitals reported an increase of 53,500 fulltime personnel in 1965 which pushed total personnel employed in these hospitals to a new peak of 1,386,215. On the national average this adds up to 246 fulltime personnel per 100 patients per day.

In commenting on the increased cost of operating a hospital, Dr. Crosby said, "Hospital costs have been rising 7 or 8 per cent per year for a number of years now, mainly because of the salary lag between industry and hospitals. If hospitals are to attract the competent personnel required to furnish the kind of hospital care to which Americans have become accustomed the gap between hospital and industry salaries will have to be virtually closed."

The AHA survey lists a total of 7,123 hospitals (of all types), with 1,703,522 beds, in the 1965 report. This overall total includes federal hospitals and the long-term nonfederal institutions many of which are operated by state and local governments.

In the short-term community hospitals category 5,736 institutions have a total of 741,292 beds which accommodate 91.8 per cent of all hospital admissions. The average length of stay in the community hospitals in 1965 was 7.8 days and the average occupancy was 76 per cent. The average occupancy ranged from a high of 80 per cent in the East North Central region (Illinois, Indiana, Michigan, Ohio, Wisconsin) to a low of 68.8 per cent in the Mountain region (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming).

The \$56.26 hospital expense per patient day in the Pacific region (Alaska, California, Hawaii, Oregon, Washington) was high for the country. The lowest was \$37.29 in the East South Central region (Alabama, Kentucky, Mississippi, Tennessee).





### Book Reviews

**Fundamentals of Clinical Hematology.** By Byrd S. Leavell, M.D., Professor of Internal Medicine, University of Virginia School of Medicine and Oscar A. Thorup, Jr., M.D., Associate Professor of Medicine, University of Virginia School of Medicine. 597 pages with illustrations. Philadelphia: W. B. Saunders Company, 1966. \$12.50.

The second edition of a book which has already won wide acceptance in clinical hematology should find a welcome place on the reference shelf of anyone who needs such a book. The first edition has been completely rewritten so that the anemias are now divided into those disorders of vitamin B<sub>12</sub> and folic acid metabolism, disorders of iron metabolism, bone marrow failure, hemolytic anemias and anemias resulting from other disorders. Each section covers the basic metabolism involved, causes, diagnosis and treatment. Illustrative case reports are also included. The material is presented in a succinct, clear manner and recent advances are included. References are plentiful and good.

The section on coagulation gives a clear thumbnail sketch of each classical disorder and then presents an orderly schema of the clinical approach to a bleeding problem. The sections on leukemias, lymphomas and myeloma are concise, clear and up to date. However, the section on therapy is too brief and suffers from the lack of illustrative cases. Nothing is included about the dosages, contraindications or comparative values in various diseases. This section cannot be relied upon to guide the uninitiated in the actual therapy of a patient.

This is a good book for general practitioners or internists, who need a ready reference to hematologic diseases. The laboratory technical section is inadequate for pathologists or for anyone interested in the laboratory evaluation of hematologic disease.

WARREN N. BELL, M.D.

**Bone Tumors.** By Louis Lichtenstein, M.D., Clinical Professor of Pathology, University of California, San Francisco. 411 pages with illustrations. St. Louis: C. V. Mosby Company, 1965. \$16.75.

The first and second editions of this delightful monograph were exceptionally well received. In this third edition Dr. Lichtenstein has provided something for everyone. As in previous editions, the text provides excellent photographs. Some 50 new illustrations have been added for a net gain of 31 pictures.

A new chapter on benign and malignant chondroid tumors has been added and because of the author's vast experience, it will do much to clarify the status of these confusing lesions. Other chapters have been revised and clarified and new concepts have been added. However, in the words of the author, "there has not been any explosion in this field."

This text is primarily directed to the pathologist, the radiologist, and the orthopedic surgeon. However, the student or anyone having any interest in bone tumors will find it rewarding and instructive. The author has had vast experience and his aim is to supply practical answers to his colleagues in the allied disciplines. To this extent, he has been successful in a very readable style and one should, therefore, not quibble over the pragmatic presentation.

It is hoped by the reviewer that the "Foreword to Pathologists" will be read by his clinical colleagues, and that better communications will be opened between pathologists and those treating bone lesions.

THOMAS F. PUCKETT, M.D.

**Symposium on Cataracts.** Transactions of the New Orleans Academy of Ophthalmology. 340 pages with illustrations. St. Louis: C. V. Mosby Company, 1965. \$19.50.

The art of removing cataracts dates back 3,000 years, so one might think the subject would leave very little to be learned or discussed. However,

at Merck Sharp & Dohme...

understanding...

precedes development

The synthesis of cortisone was accomplished by Merck Sharp & Dohme in 1948—the famous “Compound E” used by Dr. Philip Hench in his historic experiment at the Mayo Clinic.

But proud as we are of our role in the development of cortisone and subsequent corticosteroids, we have continued to seek a greater understanding of arthritic disorders

and new drugs for their treatment.

One such drug—INDOCIN® (indomethacin), a nonsteroid, anti-inflammatory agent fundamentally different in structure and activity from other drugs in use—was recently made available for the treatment of arthritic conditions. It opens new possibilities for the long-term management of arthritis and inflammatory disease.



**MERCK SHARP & DOHME**

Division of Merck & Co., Inc., West Point, Pa.

where today's theory is tomorrow's therapy



# INDOCIN®

## INDOMETHACIN

**Indications:** Chronic and acute rheumatoid arthritis, rheumatoid (ankylosing) spondylitis, degenerative joint disease (osteoarthritis) of the hip, and gout.

**Contraindications:** Active peptic ulcer, gastritis, regional enteritis, or ulcerative colitis. Safety in pregnancy has not been established. Not recommended for pediatric age groups.

**Warning:** Patients who experience dizziness, lightheadedness, or feelings of detachment on INDOCIN should be cautioned against operating motor vehicles, machinery, climbing ladders, etc. Use cautiously in patients with psychiatric disturbances, epilepsy, or parkinsonism.

**Precautions and Adverse Reactions:** Most commonly, headache, dizziness, lightheadedness, G.I. disturbances. The C.N.S. effects are often transient and frequently disappear with continued treatment or reduced dosage. The severity of these effects may occasionally require cessation of therapy. G.I. effects may be minimized by giving the drug with food or with antacids or immediately after meals. Ulceration of the stomach, duodenum, or small intestine has been reported and, in a few instances, severe bleeding with perforation and death. Gastrointestinal bleeding with no obvious ulcer formation has also been noted; INDOCIN should be discontinued if G.I. bleeding occurs. As a result of G.I. bleeding, some patients may manifest anemia, and for this reason periodic hemoglobin determinations are recommended. Rare reports of effects not definitely known to be attributable to INDOCIN include bleeding from the sigmoid colon (either from a diverticulum or without a known previous pathologic condition), perforation of preexisting sigmoid lesions (diverticulum, carcinoma), and hematuria. In other rare cases, a diagnosis of gastritis has been made while the drug was being given. One patient developed ulcerative colitis, and another, regional ileitis, while receiving INDOCIN; when the drug was given to patients with preexisting ulcerative colitis, there was an increase in abdominal pain. Infrequently observed side effects may include drowsiness, tinnitus, mental confusion, depression and other psychic disturbances, blurred vision, stomatitis, pruritus, edema, and hypersensitivity reactions. Slight BUN elevation, usually transient, has been seen in some patients, although the preponderance of evidence indicates that INDOCIN does not adversely affect renal function, even in patients with preexisting renal disease. Nevertheless, renal function should be checked periodically in patients on long-term therapy. Leukopenia has been seen in a few patients. Transient elevations in alkaline phosphatase, cephalin-cholesterol flocculation, and thymol turbidity tests have been observed in some patients and, rarely, elevations of SGOT values; the relationship of these changes to the drug, if any, has not been established. As with any new drug, patients should be followed carefully to detect unusual manifestations of drug sensitivity. Before prescribing or administering, read product circular with package or available on request.

this is not so. While successful cataract surgery is still the most satisfactory procedure in the ophthalmologist's repertoire of surgery, even one single unsuccessful cataract operation in a long series of cases causes much soul searching. This stimulus is certainly one of the reasons that wherever ophthalmologists gather the subject of cataract surgery is in the forefront. Therefore this book is most appropriate and timely.

In deference to the busy ophthalmologist, the subject of embryology of the lens is fortunately omitted in this book and references are given for those who would pursue this subject further. The book covers all other aspects of cataract surgery in an orderly and thorough fashion that characterizes these symposiums that are given by the New Orleans Academy of Ophthalmology each year. For those who are unable to attend these meetings the reading of the Symposium as presented by the Editorial Committee of the New Orleans Academy of Ophthalmology is next best.

The chapter on the management of complications following cataract surgery, particularly the rarer ones such as postoperative fungal infection should be a valuable aid and the round-table discussions are a "must" for both the practicing ophthalmologist and the resident.

The only criticism I could possibly suggest is that the time lag from the date of the meeting to the date of publication is too long. In this age of automation it would be a boon if the tedious task of editing and publishing such valuable educational material could be hastened.

GEDDES B. FLAGG, M.D.

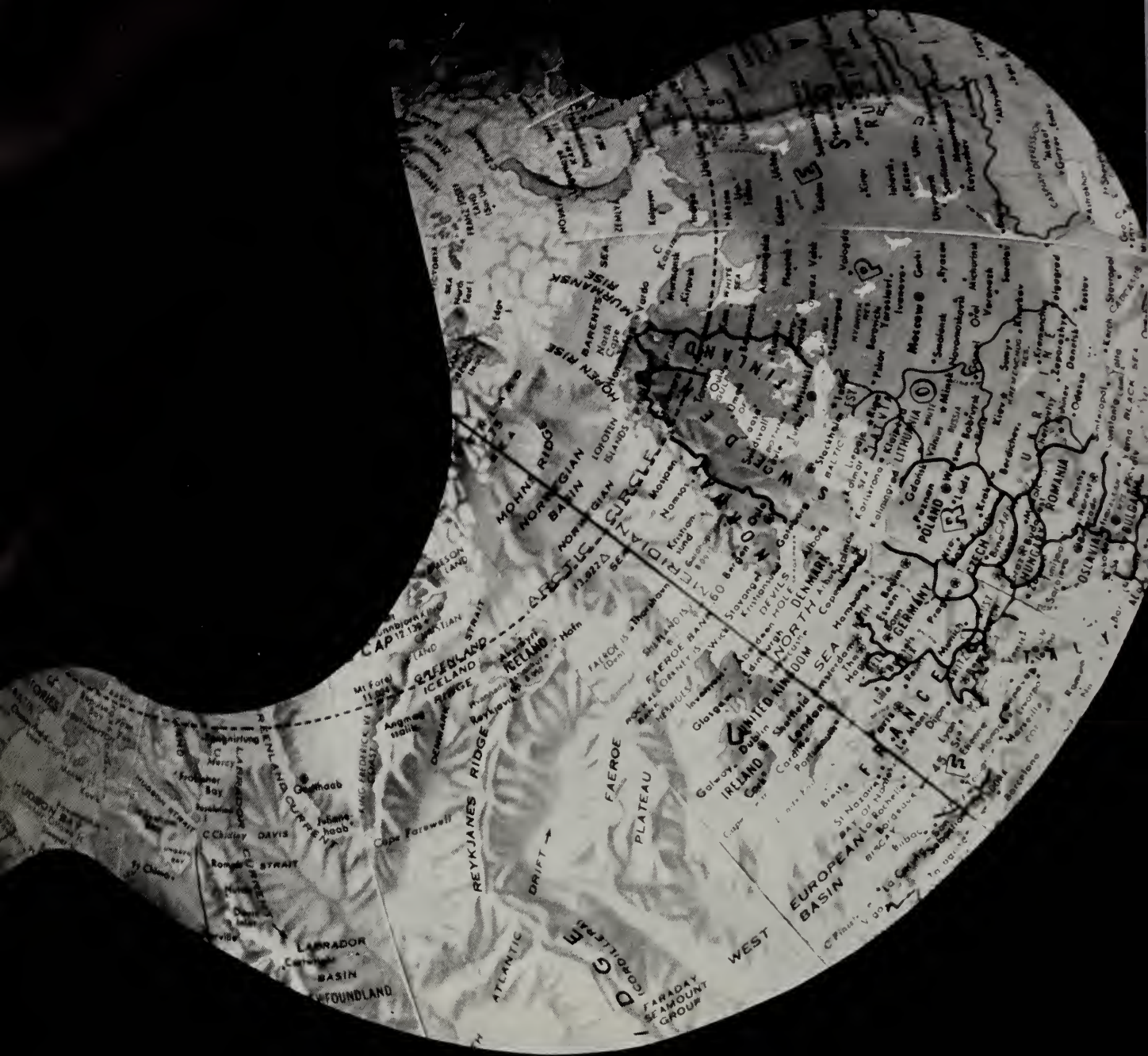
## Quackery Conclave Set for Chicago

The third National Congress on Medical Quackery will be held Oct. 7-8 in Chicago at the Pick-Congress Hotel. The meeting will be sponsored by the American Medical Association and the National Health Council.

The Congress will bring together again major American groups concerned with efforts to safeguard the public against useless cures, mechanical gadgets, food fads and other quack devices and worthless treatment. The First National Congress on Medical Quackery was held in 1961 and the Second Congress was held in 1963.

The first two national congresses generated widespread interest in the need for education of the public against quackery, the AMA said. This interest has been translated into action at a state





# The “Socio- geographic” mystery



# Why is one man's gastric ulcer another man's duodenal?



**Geographic variation** in the *incidence* of peptic ulcer is a familiar fact. But the proclivity of certain *kinds* of ulcer for certain geographic areas is a recently recognized phenomenon.<sup>1,2</sup>

For example, in one particular Norwegian fishing village there is a tendency for patients to develop a gastric ulcer; anywhere else in Norway, ulcers are usually duodenal. Peruvians high in the Andes have more gastric ulcers than their compatriots in the lowlands. Why? Nobody knows.

**Social variations, too.** Even in the same geographic areas there are interesting variations. An Englishman's ulcer depends on his social standing—professional men suffer with duodenal ulcers, while workingmen have more of the gastric variety. In southern India the pattern is reversed. Here, duodenal ulcers are common among laborers and agricultural workers and rare among the upper classes.

Investigators are exploring every possible theoretical avenue in their search for the cause of peptic ulcer. Of all the factors implicated in ulcerogenesis, the one that is generally acknowledged to be of primary importance is hypersecretion of gastric acid.<sup>3-8</sup> Or, as one author states it: "The medical management of peptic ulcer pharmacologically is, in the final analysis, concerned largely with the effective inhibition of peptic activity."<sup>3</sup>

Robinul (glycopyrrolate) provides potent, rapid, specific antisecretory action confirmed by gastric analyses and x-ray evidence of clinical effectiveness.<sup>3,7,9-12</sup> Relieves pain with "impressive" promptness.<sup>8</sup> Quickly alleviates acute discomfort, and effectively counteracts gnawing pain, preprandial midepigastric pain, belching and other ulcer symptoms.<sup>7</sup> Suppression of nocturnal pain is "outstanding."<sup>13</sup> Maximally effective doses may be given with minimal side reactions, and the incidence of unwanted anticholinergic effects is negligible.<sup>3,7-14</sup>

no matter what the ulcer theory...the fact is that

# Robinul<sup>®</sup>

(glycopyrrolate)

## promotes the essential ulcer-healing environment

A-H-ROBINS

(brief summary follows)

# Robinul<sup>®</sup> (glycopyrrolate)

**promotes the  
essential ulcer-healing  
environment**

**Indications:** In addition to its primary indications for duodenal and gastric ulcer, Robinul (glycopyrrolate) is indicated for other GI conditions that may benefit from anticholinergic therapy. Robinul-PH Forte (glycopyrrolate 2 mg. with phenobarbital) is indicated when these situations are complicated by mild anxiety and tension.

**Contraindications:** Glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric retention, prostatic hypertrophy, duodenal obstruction, cardiospasm (megaesophagus), and achalasia of the esophagus, and in the case of Robinul-PH Forte, sensitivity to phenobarbital.

**Precautions:** Administer with caution in the presence of incipient glaucoma.

**Adverse Reactions:** Dryness of the mouth, blurred vision, urinary difficulties, and constipation are rarely troublesome and may generally be controlled by reduction of dosage. Other side effects associated with the use of anticholinergic drugs include tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsiness, and rash.

**Dosage:** Dosage should be adjusted according to individual patient response. Average and maximum recommended dose is 1 tablet 3 times a day: in the a.m., early p.m., and at bedtime. *See product literature for full prescribing information.*

**Supply:** Robinul (glycopyrrolate 1 mg.); Robinul Forte (glycopyrrolate 2 mg.); Robinul-PH (glycopyrrolate 1 mg.) with phenobarbital 16.2 mg. (Warning: May be habit-forming); Robinul-PH Forte (glycopyrrolate 2 mg.) with phenobarbital 16.2 mg. (Warning: May be habit-forming.) In bottles of 100 and 500 scored tablets.

**References:** 1. Jones, F. A., and Gummer, J. W. P.: *Clinical gastroenterology*, Springfield, Ill., Charles C Thomas, 1960, pp. 322-3. 2. Bockus, H. L.: *Gastroenterology*, 2nd ed., vol. I, Philadelphia, Saunders, 1963, p. 468. 3. Sun, D. C. H.: *Ann NY Acad Sci* 99:153 (Feb. 28) 1962. 4. Moore, V. A.: *Postgrad Med* 38:216 (Sept.) 1965. 5. Dragstedt, L. R., Woodward, E. R., Storer, E. H., Oberhelman, H. A., Jr., and Smith, C. A.: *Ann Surg* 132:626 (Oct.) 1950. 6. Posey, E. L., Jr., Smith, P., Turner, C., and Aldridge, J.: *Amer J Dig Dis* 10:399 (May) 1965. 7. Lamphier, T. A., Siegel, L., and Goldberg, R. I.: *Amer J Gastroent* 37:551 (May) 1962. 8. Kasich, A. M., and Fein, H. D.: *Ibid* 39:61 (Jan.) 1963. 9. Epstein, J. H.: *Ibid* 37:295 (Mar.) 1962. 10. Moeller, H. C.: *Ann NY Acad Sci* 99:158 (Feb. 28) 1962. 11. Slinger, A.: *J New Drugs* 2:215 (Jul.-Aug.) 1962. 12. Barman, M. L., and Larson, R. K.: *Amer J Med Sci* 246:325 (Sept.) 1963. 13. Shutkin, M. W.: *Amer J Gastroent* 38:682 (Dec.) 1962. 14. Fleshler, B.: *J New Drugs* 2:211 (Jul.-Aug.) 1962. **A. H. ROBINS CO., INC.**  
Richmond, Virginia

and community level. Quackery conferences have been held in many states and more are planned.

The quacks, put down in one area, keep showing up somewhere else with a new gadget or product, and there can be no letup in the campaign against them, the AMA declared. The Third National Congress will once again focus the full light of publicity and public opinion on quackery, which needlessly costs the American people an estimated billion dollars a year.

The theme of the three half-day sessions will be "Medical Quackery: 1966." Among speakers at the opening session will be James L. Goddard, M.D., commissioner of the U. S. Food and Drug Administration, "Drug and Device Quackery"; Ronald M. Deutsch, California author, "Nutritional Nonsense and Food Fanatics," and I. Frank Tullis, M.D., University of Tennessee professor of medicine, "Obesity: A Growing Problem."

A second session will include as speakers James Holland, M.D., of Roswell Park Memorial Institute, Buffalo, N. Y., "The Krebiozen Story: Is Cancer Quackery Dead?"; Mrs. Winthrop Rockefeller, president of the National Association for Mental Health, "Mental Health and Psychological Counseling"; Robert J. Samp, M.D., of Madison, Wis., "A Look Inside Medicine's Own House"; Irving J. Ladimer, vice president of the National Better Business Bureau, "Literature and Advertising," and John W. Miner, chief of the medicolegal section of the Los Angeles County District Attorney's Office, "The Costs of Quackery."

The final session on Oct. 8 will be devoted to chiropractic. Speakers will include Joseph A. Sabatier, Jr., M.D., of the AMA's Committee on Quackery, with a slide film documentary; Eugene Robillard, M.D., associate dean of the Faculty of Medicine of the University of Montreal, "A Survey of Chiropractic," and H. Thomas Ballantine, Jr., M.D., of Massachusetts General Hospital and Harvard Medical School, "Medicine and Chiropractic."

Others on the program will include John G. Thomsen, M.D., chairman of the AMA Committee on Quackery; The Rev. Dr. Paul B. McCleave, director of the AMA Department of Medicine and Religion; John W. Knutson, D.D.S., president of the National Health Council; Charles L. Hudson, M.D., AMA president; Gerald Dorman, M.D., a trustee of AMA and a director of the National Health Council; and Frederick R. Scroggin, M.D., Joseph P. O'Connor, M.D., and Henry I. Fineberg, M.D., members of the AMA Committee on Quackery.





# USPHS Reports Massive Increase of Syphilis in Five State Gulf South Area

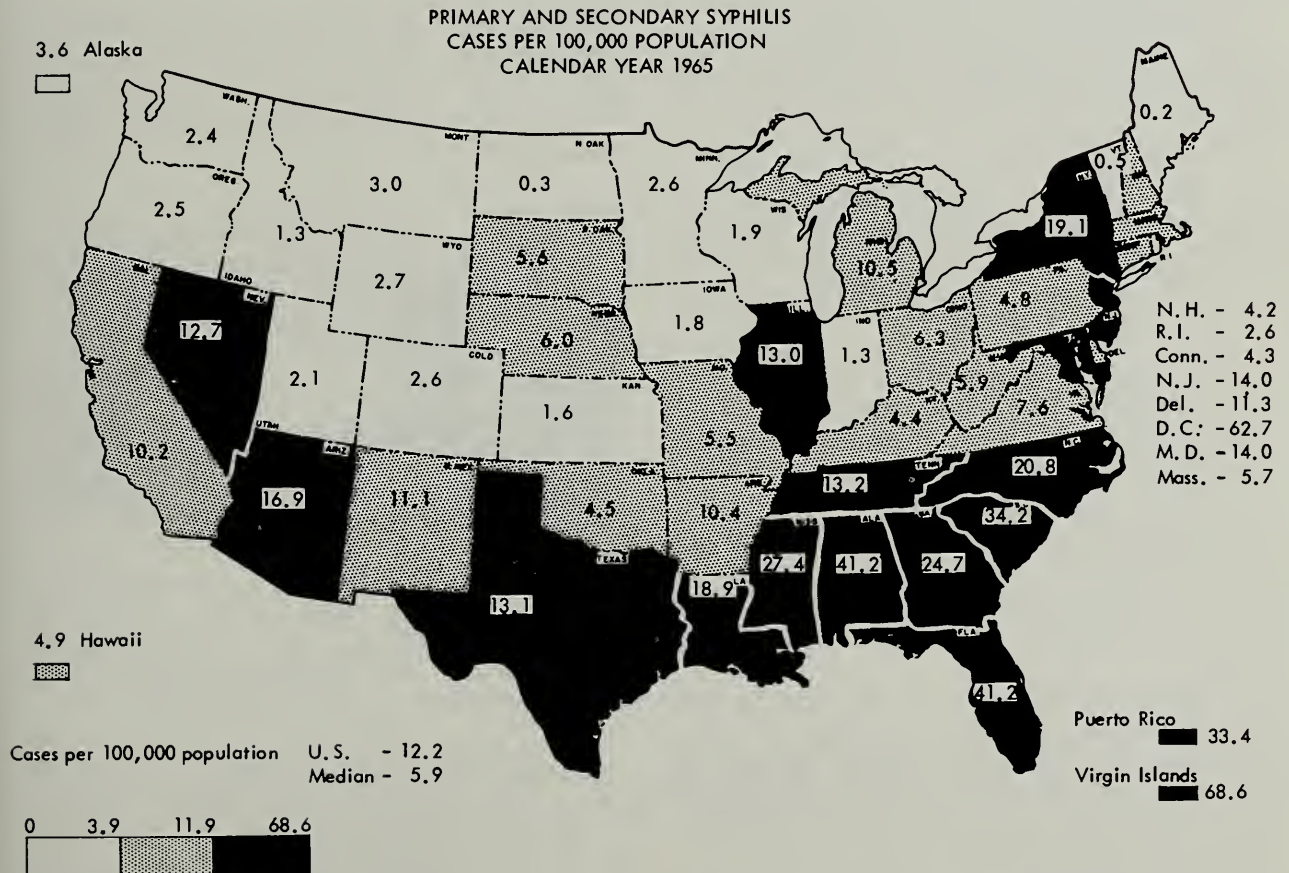
The mounting incidence of venereal disease in the United States is a problem of major importance, according to Dr. William J. Brown of the U. S. Public Health Service Communicable Disease Center at Atlanta. In a special report to the Mississippi State Medical Association, Dr. Brown said that syphilis in the state has increased by 800 per cent since 1957.

The Mississippi rate per 100,000 population in 1957, according to CDC statistics, was 3.3 while the 1965 rate was 27.4 based on 631 cases of pri-

mary and secondary infectious syphilis. Incidence of "early" and "late" syphilis reported monthly in the JOURNAL varied from the CDC figures, being somewhat higher.

Dr. Brown, in acknowledging the rapid rise of syphilis morbidity in the past decade, interposed notes of caution in interpreting the gloomy biostatistics. He says that increasing primary and secondary syphilis morbidity in any given area may mean some or all of the following:

—Syphilis incidence is increasing.



*Incidence of primary and secondary syphilis is illustrated for 1965 in cases per 100,000 population by states and territories. Mean U. S. rate was 12.2, and*

*median rate was 5.9. Incidence is significantly higher in the Gulf South with a progressive increase in a west-to-east pattern. Data were compiled by USPHS.*

—The finding and identifying of cases in the earliest stages has been intensified.

—Private physicians are reporting a greater proportion of the cases which they diagnose.

Dr. Brown further warns that "it must not be overlooked, however, that in any given area, increasing incidence may co-exist with decreasing effectiveness of case finding and/or reporting, and *vice versa*."

"So in two areas," he continued, "opposite combinations of factors may result in identical trends or even static figures."

The report concluded with the assertion that the Public Health Service prefers to leave any interpretation of morbidity figures for individual states and cities to local authorities who are in much more advantageous positions to know all the factors.

The mean national incidence of syphilis was reported at 12.2 per 100,000 with a median incidence of 5.9. In the Gulf South, however, the state-by-state rate was substantially higher with Texas reporting 13.1; Louisiana, 18.9; Mississippi, 27.4; Alabama, 41.2; and Florida, 41.2. Overall rise in cases recorded by CDC showed an increase from 6,400 in 1956 to more than 23,000 in 1965.

## Interns, Residents to Get Auto Discounts

Interns and residents will get a new windfall in the purchase of 1967 automobiles. Through an arrangement made by the National Association of Residents and Interns, physicians in training may buy any new American-made auto for dealer's cost plus \$100.

The program has been initiated on a trial basis in New York, Chicago, and Los Angeles. It will soon be expanded to other cities, NARI spokesmen said.

Delivery is made in three to four weeks after the order is placed, and extras such as power options and air conditioning may be added on at actual dealer's cost. Savings on most lower and medium priced models will range from \$400 to \$750, the spokesmen said.

The physician purchaser will have full choice of make, model, style, and trim, just as if he were buying the car through a local dealer.

## University Hospital Adds 154 Beds

Ground was broken at the Jackson campus of the University of Mississippi School of Medicine for a 154 bed addition to the University Hospital. The new facility will have a 100 bed pediatric wing and 54 private rooms for adult patients.

The pediatric addition will be constructed in the new concept of the "round hospital" with corridors and rooms radiating from a center service core. The design permits closer observation of patients and greater effectiveness in utilizing nursing services. Dr. Blair E. Batson, professor and chairman of the department of pediatrics, headed the committee charged with planning the new children's addition.

University officials said that the addition would cost \$3.42 million. The 1964 regular session of the legislature provided \$1 million for the project, and a Hill-Burton grant of \$2.26 million has been secured. The remainder needed will come from gifts to a special pediatric fund and from other nonappropriated money.

Dr. David B. Wilson, director of the University Hospital, said that the new private adult section will be added in two 27 bed units joined to the hospital's second and third floors. Existing waiting rooms and lounges at those levels will be utilized.



*New addition to the University Hospital will be a 154 bed south wing. Circular unit will house 100 pediatric beds, while 54 private adult patient beds will occupy two floors connected to present structure. Addition will raise bed capacity to 460.*

Estimated time for construction is 18 months, with a 1968 target date for completion. Architects for the project include the late T. N. Touchstone, Jr., and Biggs, Weir, Neal, and Chastain. Contract awards have been made to H. A. Lott, general contractor; Frasier Electrical Co.; and Speed Mechanical, Inc.



# MOLECULAR REMODELING—

## *laboratory exercise or clinical necessity?*

More than twenty-five years have passed since the discovery of the diuretic activity of sulfanilamide started pharmacologists on a succession of molecular remodelings to find the ideal diuretic.

### **Diuresis—a sought-after clinical effect from an unwanted side effect**

It started in 1937 when a clinician reported that the administration of a sulfonamide was sometimes accompanied by an unexplainable side effect—metabolic acidosis.<sup>1</sup> Three years later the side effect was explained. The sulfonamide radical of sulfanilamide inhibited carbonic anhydrase,<sup>2</sup> the enzyme responsible for converting carbon dioxide and water to hydrogen ions and bicarbonate ions.

Later, other investigators showed by dog experiments that metabolic acidosis probably resulted when the inhibition of carbonic anhydrase upset the exchange of hydrogen and sodium ions, causing increased excretion of sodium as the bicarbonate.<sup>3</sup>

It was twelve long years after the first report of the unexplainable side effect (metabolic acidosis) that it was finally shown that large doses of sulfanilamide administered to edematous patients were indeed capable of promoting diuresis.<sup>4</sup> However, the possibility of toxic effects from its prolonged use and its relatively weak diuretic action made it impractical for clinical use as a diuretic.<sup>5</sup>

Because the inhibition of carbonic anhydrase seemed to be the key to effective diuresis, investigators began to look for more potent enzyme inhibitors—in the hopes that they would be more effective diuretics.

The most important of these early compounds, acetazolamide, enjoyed several years of fairly wide clinical use.

Its carbonic anhydrase inhibitory activity was several hundred times greater than that of sulfanilamide.<sup>6</sup> The increase in inhibitory activity, however, increased not only the excretion of sodium and bicarbonate ions, but also the excretion of potassium.<sup>7</sup> And, like its predecessor, acetazolamide precipitated mild acidosis. Its prolonged use could result in hypokalemic acidosis.<sup>7</sup>

### **The 'thiazides'—an answer to the metabolic acidosis caused by carbonic anhydrase inhibition**

Despite the fact that the sulfonamide

group appeared to be responsible for carbonic anhydrase inhibition which in turn appeared to be responsible for diuresis, investigators began to synthesize compounds with structural alterations to the sulfonamide group.

The first major breakthrough came with the synthesis of chlorothiazide. Altering the sulfonamide group did indeed alter the ability of chlorothiazide to inhibit carbonic anhydrase—it was only 1/10th as potent as acetazolamide in inhibiting the enzyme.<sup>8</sup> Despite the drop in inhibitory potency, however, chlorothiazide proved to be an effective diuretic—an observation that led to the conclusion that its diuretic action was due to some mechanism other than its action on carbonic anhydrase.<sup>9,10</sup>

For effective diuresis, chlorothiazide was administered in daily dosages ranging from 250 to 2000 mg.<sup>11</sup> It increased the excretion of sodium and chloride; and, to a lesser extent, potassium and bicarbonate.<sup>11</sup> The excretion of potassium appeared to be maximal at higher dose levels at which, theoretically, the carbonic anhydrase inhibitory effect is more active.<sup>11</sup> Its prolonged use, therefore, could sometimes result in metabolic hypokalemic, hypochloremic alkalosis.<sup>7</sup>

### **Naturetin—effective diuresis with more favorable electrolyte balance**

Other thiazides followed—with improvements being aimed at two particular areas: 1. attempts to increase diuretic action in relation to the milligram potency of the drug, and 2. attempts at a more favorable sodium/potassium ratio in the urine, i.e., to decrease the excretion of potassium while maintaining the excretion of sodium.<sup>12</sup>

One of these, Naturetin, Squibb Bendroflumethiazide, has made advances on both these points. "By adding a 3-benzyl radical to hydroflumethiazide a rather dramatic reduction in dose range is accomplished. With this drug, effective sodium excretion is obtained with

doses between 2.5 and 10 mg., which is a 200 to 1 ratio as compared to chlorothiazide..."<sup>13</sup>

Moreover, due probably to its virtual lack of carbonic anhydrase inhibition, Naturetin (bendroflumethiazide) has been shown to cause less potassium and bicarbonate loss and less alteration in urinary pH than either chlorothiazide or hydrochlorothiazide.

Naturetin is outstandingly effective not only in establishing, but also in maintaining, excretion of retained fluid in edematous patients. And its duration of action is sufficiently prolonged to allow a single daily administration in most patients. Naturetin is also an effective antihypertensive agent.

**Contraindications:** Severe renal impairment; previous hypersensitivity.

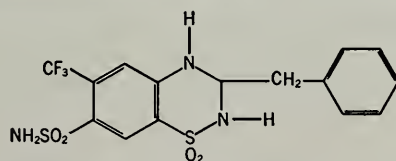
**Warning:** Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting, or G.I. bleeding occur.

**Precautions:** The dosage of ganglionic blocking agents, veratrum, or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Electrolyte disturbances are possible in cirrhotic or digitalized patients.

**Side Effects:** Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, and rashes may occur.

**Supplied:** Naturetin (Squibb Bendroflumethiazide) 5 mg. and 2.5 mg. tablets. Also available Naturetin  $\bar{c}$  K [Squibb Bendroflumethiazide (5 or 2.5 mg.) with Potassium Chloride (500 mg.)]. For full information, see Product Brief.

**References:** 1. Southworth, H.: *Proc. Soc. Exper. Biol. & Med.* 36:58, 1937. 2. Mann, T. and Keilin, D.: *Nature* 146:164, 1940. 3. Pitts, R. F., and Alexander, R. S.: *Am. J. Physiol.* 144:239, 1945. 4. Schwartz, W. B.: *New England J. Med.* 240:173, 1949. 5. Friedberg, C. K., in Moyer, J. H., and Fuchs, M.: *Edema Mechanisms and Management*, Philadelphia, W. B. Saunders Co., 1960, p. 259. 6. Cumming, J. R.; Tabachnick, E., and Seelig, M., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 254. 7. Werko, L., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 188. 8. Beyer, K. H., Jr., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 274. 9. Maren, T. H., and Wiley, C. E.: *J. Pharmacol. & Exper. Therap.* 143:230, 1964. 10. Earley, L. E., and Orloff, J.: *Ann. Rev. Med.* 15:149, 1964. 11. Fuchs, M., and Mallin, S. R., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 276. 12. Ford, R. V., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 290. 13. cited in Fuchs, M., and Mallin, S. R. (ref. 11): *op. cit.*, p. 283.



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SQUIBB BENDROFLUMETHIAZIDE  
to reduce excess fluid  
or high blood pressure

SQUIBB



'The Priceless Ingredient' of every product is the honor and integrity of its maker.



## Blue Plan Names New Executives

Two top management promotions among executives of the Mississippi Hospital and Medical Service, Blue Cross-Blue Shield, were announced by Dr. J. C. Woosley, president, following action on the recommendations by the plan's board of directors July 20.



*Mr. Butler*

Named to the post of secretary-treasurer of the corporation was George W. Butler, Jr., former vice president. William G. Shakelford, a vice president of the plan since 1963, was named to head the newly organized Professional Affairs Division.

Butler joined the plan staff in 1952 as manager of the Hospital Relations Department. In July of 1963, he was named a vice president in charge of hospital affairs, and early in 1966, he was assigned the tasks of organizing a division to process medical and surgical claims and to oversee professional relations with physicians.

Shakelford first became associated with Blue Cross-Blue Shield in 1951 as a group enrollment representative in the Columbus area. In January of 1958, he was promoted to Assistant Supervisor of Group Enrollment Services in the Jackson headquarters office, and in 1959, he was named manager of Enrollment Services.

In his new executive capacity, Shakelford will direct all plan activities in the processing of physicians' claims and in the conduct of professional relations.

Other promotions announced as a result of board actions included James H. Reed to the post of assistant to the president and Miss Lottie



*Mr. Shakelford*

B. Kuykendall to the position of assistant secretary. Gaddy V. Temple was named a vice president to assume responsibilities of heading the General Services Division in addition to duties as personnel director.

Raymond J. Zasoski, vice president, moved from the General Services Division to the Operations Division, succeeding Shakelford. Neal W. Cirlot continues as director of the Public Relations and Advertising Department.

W. C. Moseley, vice president, continues to head the plan's Hospital Affairs Division, and Butelle Graham, vice president, remains as director of nongroup enrollment. George P. Lane, vice president, continues as chief of the Enrollment Service Center.

The Actuary and Underwriting Department remains under the direction of Morris Raines, vice president.

Eustice G. Raines, executive vice president, continues to head the Group Enrollment Division and carries the additional corporate responsibilities of assuming the duties of president in the absence of Dr. Woosley.

## Dr. Neill Is Named To Airport Board

Dr. Charles L. Neill of Jackson has been appointed a member of the capital city's Airport Authority, according to an announcement by the city commission. He succeeds Merle Mann, well-known real estate broker and developer.

The Airport Authority is a five-member board charged with supervision and continued development of Jackson's \$25 million jet airport and of Hawkins Field, the city's old airport. The latter is still in use for light aviation, but is being converted into an industrial park.

The Jackson neurological surgeon, a pilot and aircraft owner, received his M.D. degree from Cornell University Medical College and his postgraduate training at New York City. During World War II, he served as a medical officer in the U. S. Army, attaining the grade of lieutenant colonel. He is clinical associate professor of neurological surgery at the University of Mississippi School of Medicine and is engaged in private practice at Jackson.

Dr. Neill is past president of the Southern Neurosurgical Society and of the Neurological Society of America. He is a diplomate of the American Board of Surgery and of the American Board of Neurological Surgery.



In contact dermatitis

# Synalar®

(fluocinolone acetonide)

stabilizes cell and capillary walls

protects against the chemical impact of cytotoxins

interrupts the chain reaction of destructive changes at the cellular level

permits inactivation, absorption and transportation of toxins away from the injured area by natural processes... edema is absorbed and cells return to normal size, shape, and activity

In **inflammatory dermatoses** choose a steroid synthesized specifically for topical use. Synalar (fluocinolone acetonide) provides therapeutic results often comparable to those of systemic and intralesional corticosteroids with fewer hazards.<sup>1-3</sup>

when complicated by infection

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(fluocinolone acetonide-neomycin sulfate cream)

**For initiation of therapy:** Cream 0.025%, 5 and 15 Gm. tubes, 425 Gm. jars; **for emollient effect:** Ointment 0.025%, 15 Gm. tubes; **for maintenance therapy:** Cream 0.01%, 15 Gm. tubes, 45 Gm. tubes, 120 Gm. jars; **for intertriginous or hairy sites:** Solution 0.01%, 20 cc. and 60 cc. plastic squeeze bottles; **for infected inflammatory dermatoses:** Neo-Synalar® Cream (0.025% fluocinolone acetonide, neomycin sulfate, equivalent to 0.35% neomycin base), 5 and 15 Gm. tubes.

**Contraindications:** Tuberculous, fungal, and most viral

lesions of the skin, (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. The neomycin in Neo-Synalar Cream rarely produces allergic reactions. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. **Side Effects:** Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions.

**References:** 1. Kanee, B.: Canad Med Ass J 88:999 (May 18) 1963. 2. Scholtz, J. R.: Calif Med 95:224 (Oct.) 1961. 3. Jansen, G. T., Dillaha, C. J., and Honeycutt, W. M.: Arch Derm 92:283 (Sept.) 1965.

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LABORATORIES INC., PALO ALTO, CALIF.

## New Film, Scale Measure Depression

A new teaching and professional information film depicting the development, validation, and use of a scale for the quantitative measurement of depression has been announced by Lakeside Laboratories of Milwaukee, Wis. The scale was devised by Dr. William W. K. Zung of Durham, N. C., in the course of psychiatric research.

Lakeside spokesmen said that their organization was also making available to physicians pads of the self-rating scale for use in the Zung measurement of depression. Both the film and pads are being provided by Lakeside without charge as a professional education service.

The film is designed for specialty groups, county medical society meetings, and for hospital staff showings.

The Zung scale consists of a list of 20 statements expressed in the everyday language of the patient. They comprehensively delineate widely recognized symptoms of depression including disturbances of mood as well as biological and psychological function. Testing and scoring patients usually requires less than five minutes.

The scale, while devised for use in psychiatric research, has been found to have ready application and practical use in general practice where most cases of depression are initially encountered. Studies indicate that measurements obtained on the Zung scale correlate reliably with other more time-consuming depression rating scales in current usage.

Observers and evaluators report that use of the Zung method in a variety of patients with physical complaints which appear to have no organic basis may uncover and measure depression in the so-called "hidden depressions," saving the clinician valuable time in additional probing interviews.

The report further pointed out that in patients in whom depression is suspected but is obscured by anxiety or normal grief, the scale can be used to provide a quantitative index of depression which may be compared with depression ratings obtained in hospitalized and office patients having a variety of emotional disturbances.

Dr. Zung and his associates have emphasized published reports by other investigators showing that nearly 50 per cent of all medical and surgical patients have illnesses that are primarily emo-

tional, and of these, more than half are depressive.

Describing depression as a "condition of paradox and contradiction," the report said that it ranges from a self-limiting disease with a duration of 6 to 18 months up to one which persists for years. While the depressed patient's grasp of reality is usually undistorted, the condition—if for no other reason than suicide—must be classified as potentially fatal.

The film and self-rating pads of the Zung scale may be obtained from Lakeside Laboratories professional service representatives or by writing to the Medical Film Department, Lakeside Laboratories, Inc., 1707 East North Ave., Milwaukee, Wis. 53201. The film is 16 mm, sound and color, with a running time of 22 minutes.

## Interagency Body Names Manpower Council

The Mississippi Interagency Commission on Mental Illness and Mental Retardation has established a five-member Manpower Council to attack the problem of shortage of personnel available for work in mental health and mental retardation programs.

The council will be an interagency group composed of one representative from each of the five member agencies of the commission.

Personnel of the council includes Miss Frances Gandy, director of administrative services, State Department of Public Welfare; Dr. Frank J. Morgan, Jr., medical consultant and liaison officer, State Board of Health; Dr. William Dudley, director of training, Mississippi State Hospital at Whitfield; Miss Annie Margaret Tucker, consultant on nursing education, Board of Trustees, Institutions of Higher Learning; A. P. Fatherree, director of vocational education, State Department of Education.

The appointments were announced by C. Seth Hudspeth, director, Board of Trustees of Mental Institutions, who is chairman of the Mississippi Interagency Commission.

Hudspeth said the Manpower Council will be "empowered and encouraged to make free use of consultants and ad hoc committees to assist it in phases of its planning dealing with specific disciplines or special problem areas."

The Mississippi Interagency Commission on Mental Illness and Mental Retardation was established by the legislature this year to coordinate mental health and mental retardation services in



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**BRISTOL THERAPEUTIC SUMMARY:** For complete information consult Official Package Circular. **Indications:** Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. **Contraindications:** The drug is contraindicated in individuals hypersensitive to tetracycline. **Warnings:** Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood). **Precautions:** Mycotic or bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months. **Adverse Reactions:** Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis and allergic reactions may occur. **Usual Adult Dose:** 500 mg. b.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

**Reference:** 1. Roberts, C. E., Jr.; Perry, D. M.; Kuharic, H. A., and Kirby, W. M. M.: A. M. A. Arch. Int. Med. 107:204 (Feb.) 1961.

\*Each bidCAP contains: Tetrex (tetracycline phosphate complex equivalent to 500 mg. tetracycline HCl activity).

## ORGANIZATION / Continued

the state and to spearhead program development in both areas.

"The Manpower Council will be a vital part of the commission's program," said Hudspeth. "It will serve as the commission's primary resource for information and programming of mental health and mental retardation personnel.

"The Manpower Council will advise the commission on manpower needs and resources, and it will propose ways and means for implementing the manpower recommendations of the 1963-65 Mental Health and Mental Retardation Planning Program which resulted in the establishment of this commission."

Dr. Dorothy N. Moore, program director for the commission, expressed the hope that the Manpower Council "will concern itself with both professional and non-professional training, career recruitment, in-service training, and the retention of personnel in the state."

Establishment of the Manpower Council relates to one of four program goals announced by the Interagency Commission in June. The other three goals are (1) to develop coordinated services for the mentally ill and mentally retarded; (2) to collect facts on top-priority needs in the state in both these areas; and (3) to keep the public informed as to the primary needs of the state's mentally ill and mentally retarded.

## Squibb Airlifts Supplies in Strike

E. R. Squibb and Sons, long established ethical pharmaceutical manufacturer of New York, refused to be grounded during the crippling airlines strike. Faced with commitments for daily delivery schedules of radioisotopes, the firm chartered three airplanes and initiated "Operation Emergency Airlift."

Through July with the strike continuing after defeat of the White House settlement by union members, the Squibb private "airline" had completed more than 4,000 deliveries to 100 teaching, research, and treatment centers. Deliveries to military hospitals were included.

At Duke University Hospital at Durham, N. C., 52 brain, liver, and placenta scans were carried out during the strike using Squibb-delivered isotopes with life-threatening diagnoses being uncovered in 17 patients.

The airlift cost Squibb \$25,000 per week, but the firm added no special transportation charges to purchasers during the critical strike period.

Edmund R. Beckwith, Jr., Squibb president, told Secretary of Labor Willard Wirtz in a telegram that "continuation of the airlines strike is intolerable in the face of the national medical needs." Both the Labor Department and the White House had declined to call the strike grounding 60 per cent of the nation's scheduled flights a national emergency.

The Squibb airlift has been based at New York with daily flights direct to Pittsburgh, Washington, Atlanta, Boston, Detroit, Cleveland, and Chicago. Transshipment arrangements from those key points were made to cover 50 additional cities.

## Blue Shield Wins Key Court Decision

The National Association of Blue Shield Plans said that it had won a key court decision to protect the Blue Shield name and symbol.

According to NABSP, the 5th United States Circuit Court of Appeals reversed a lower court decision permitting the United Bankers Life Insurance Company, a Texas firm, to use the name and symbol "Red Shield."

The higher court ruled that the words and the symbol "Red Shield" are confusingly similar to Blue Shield. United Bankers is selling its "Red Shield" health insurance in competition with Group Medical & Surgical Service, the Texas Blue Shield Plan which was a co-appellant in the suit.

John W. Castellucci, NABSP executive vice president, said:

"This is a significant decision for NABSP and all local Blue Shield Plans. It will aid us greatly in protecting the well-accepted and trusted name and symbol of Blue Shield as the leader in the medical-surgical prepayment field."

In reversing the lower court decision, the Circuit Court stated:

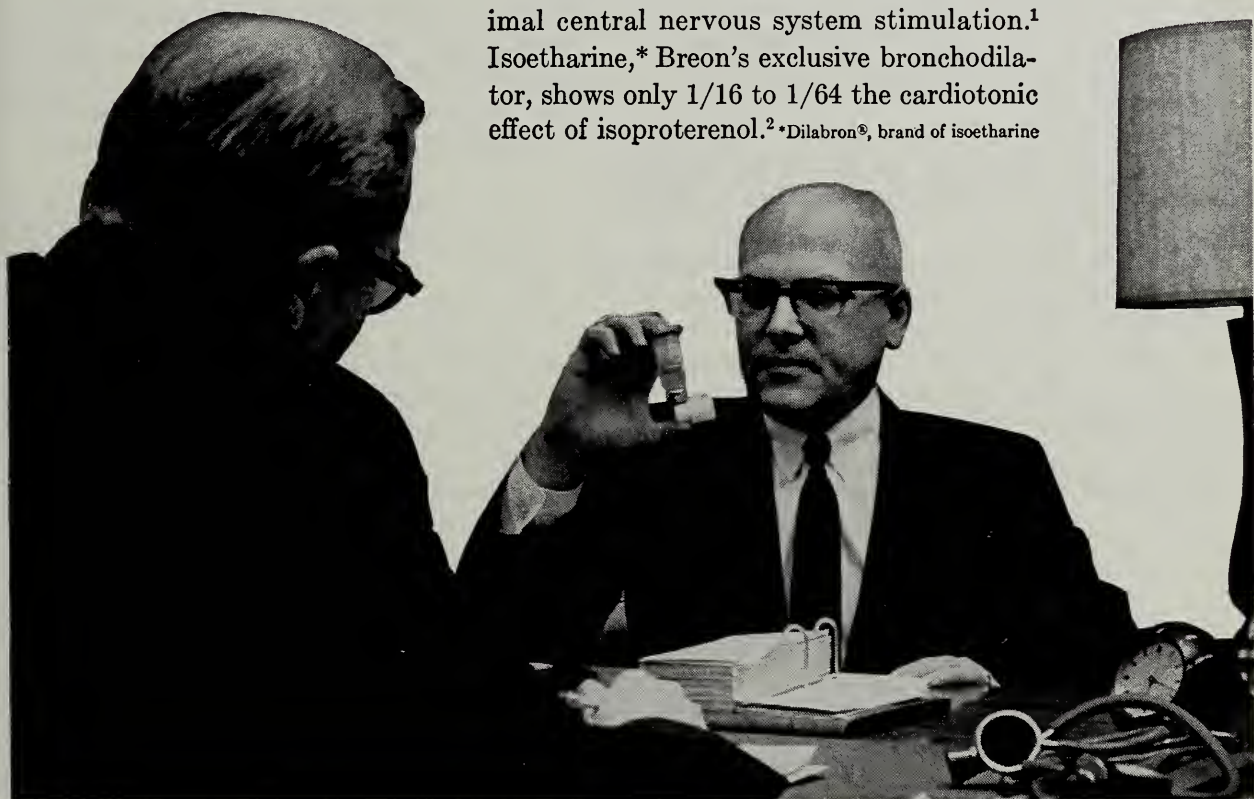
"While the blue shield is of the celtic type, the top portion being concave upwards, and the red shield has the configuration known as heraldic, the top being composed of two arcs forming at the point at their intersection, the shapes are generally similar.

"The impression or mental impact conveyed by both, at least to one not versed in heraldry, must be that of a shield, pure and simple, not of a particular type or configuration of shield.



# "I like Bronkometer... I breathe better... don't get the jitters."

Patients feel relaxed with Bronkometer. Its bronchodilator-decongestant action has minimal central nervous system stimulation.<sup>1</sup> Isoetharine,\* Breon's exclusive bronchodilator, shows only 1/16 to 1/64 the cardiotoxic effect of isoproterenol.<sup>2</sup>•Dilabron®, brand of isoetharine



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isoetharine 0.6%; phenylephrine 0.125%; thenyldiamine 0.05%—Superior because it contains isoetharine

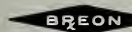
**COMPOSITION:** Bronkometer delivers at the mouthpiece 200 metered doses of: 350 mcg isoetharine methanesulfonate (0.6%); 70 mcg phenylephrine HCl (0.125%); and 30 mcg thenyldiamine HCl (0.05%) with saccharin, menthol and fluorochlorohydrocarbons as inert propellants. Preserved with ascorbic acid 0.1% and alcohol 30%.

**RECOMMENDED DOSAGE:** One or two inhalations with at least one minute between inhalations. Occasionally more may be required, however in most cases, inhalations need not be repeated more than every four hours. Dosage should be adjusted to the severity of the condition and to patient's response.

**PRECAUTIONS:** Bronkometer is unusually free from cardiovascular and other side effects, but the usual precautions associated with sympathomimetic amines should be observed. Bronkometer should not be administered simultaneously with epinephrine or similar compounds because of the possibility of tachycardia, although it may be alternated with these agents. Dosage must be carefully adjusted in patients with hyperthyroidism, hypertension, acute coronary disease, cardiac asthma, limited cardiac reserve and in individuals sensitive to sympathomimetic amines.

**SUPPLIED:** 10 ml pressurized aerosol vials complete with measured dose valve and oral nebulizer.

References: 1. Spielman, A. D.: *Curr. Therap. Res.* 3:235 (June) 1961. 2. Herschfus, J. A.; Bresnick, E.; Levinson, L.; and Segal, M. S.: *Ann. Allergy* 9:769 (Nov.-Dec.) 1951.



BREON LABORATORIES INC. 90 Park Avenue, New York, N.Y. 10016

"The word 'shield' is the dominant portion of both word-marks. A change in the modifying color word from blue to red cannot avoid confusion, at least where both are applied to services so similar, indeed, almost identical to the public mind, as in the present case."

Melville Owen, partner in the San Francisco law firm of Owen, Wickersham & Erickson and NABSP trade mark counsel, in commenting on the court's decision, said:

"By this decision and a number of earlier successful suits, it is now well established that no one can adopt a shield, the word 'shield,' or the word 'blue,' to identify services or products in the health care field, without infringing on the famous marks of the National Association of Blue Shield Plans."

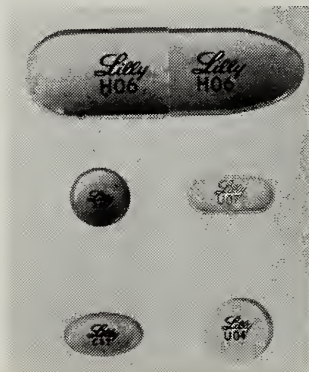
The court stated that the evidence "would require a finding" that there was intent by United Bankers to confuse and deceive the public. The court explained:

"Indeed, it seems clear from the similarity of the marks . . . that the purpose of United Bankers was to use marks as close as possible to those of the National Association, so as to appropriate the good will and good name of the blue shield, while maintaining just sufficient a distinction between the marks to confuse, if possible, both the public and the courts."

## Lilly Devises Drug Identification Code

A new system for quick and positive identification of oral medicaments has been devised by Eli Lilly and Company, long established Indianapolis, Ind., maker of ethical pharmaceuticals. Called *Identi-Code™*, the system consists of a three-character imprint on each dosage form, consisting of a letter and two figures.

*Identi-Code™* furnishes the key to identification of the product and its exact formula as well as dosage strength. A code index in booklet form has been published and distributed by Lilly to physicians,



*Examples of Lilly products showing Identi-Code™.*

hospitals, dentists, nurses, pharmacists, law enforcement officials, poison control centers, and to others dealing with medical emergencies.

Lilly spokesmen at Indianapolis say that the first products to bear the three-character code imprint are now being shipped. The drug maker anticipates that the identification system will soon be extended to all Lilly capsules and tablets. Drug identification has become increasingly important with more than a thousand companies now manufacturing plain white tablets with a variety of therapeutic applications. In the Lilly catalogue alone, the spokesmen said, there are listed more than 500 different products in capsule or tablet form.

Most previously used identification systems employed have relied on color, shape, size, and symbols. Lilly's *Identi-Code™* has been praised by FDA Commissioner James L. Goddard and AMA as an important forward step in drug safety.

## Cryo-ophthalmology Society Is Formed

Newest among subspecialty groups is the Society for Cryo-ophthalmology, according to an announcement by Dr. John G. Bellows of Chicago. The new organization is open to those interested in investigation, the preservation of ocular tissue, therapeutic applications of cryogenics to various ocular diseases, and cryosurgical technics.

The new society plans to conduct meetings immediately prior to annual sessions of the American Academy of Ophthalmology and Otolaryngology at the same convention site, Dr. Bellows said.

Inquiries and applications may be sent to 30 N. Michigan Blvd., Chicago 60602.

## McMillan Is New FDA District Chief

Leslie O. McMillan assumes the post of director of the New Orleans district of the United States Food and Drug Administration on Sept. 1. He succeeds C. A. Armstrong who has been appointed director of the Kansas City district.

The New Orleans FDA district includes Alabama, Louisiana, and Mississippi.

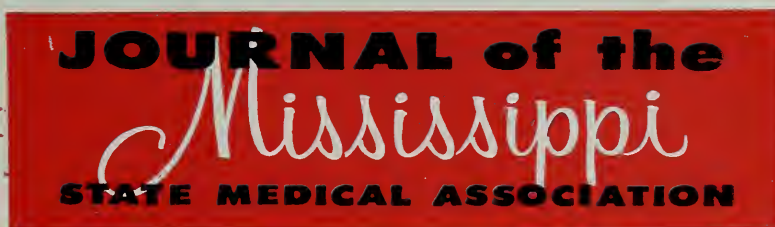
McMillan, 47, received the FDA award of merit last year for his work in developing a training course in undercover work for FDA inspectors.



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*A Key Site of Action of the  
Protoveratrine A in Salutensin*

"The main function of the  
carotid sinus is regulation of  
the blood pressure..."<sup>1</sup>

The veratrum component of  
Salutensin acts here (and in the  
myocardium), initiating  
"...a reflex fall in blood pressure  
through a generalized vaso-  
dilation and fall in heart rate."<sup>2</sup>





# NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

October 1966

Dear Doctor:

The Congress aims to crack down on open end, blue sky federal spending for assistance to states with Title XIX programs. Powerful House Ways and Means Committee is alarmed over \$830 million federal tab for program in 19 states. New York alone is gobbling up \$700 million this year.

Initially estimated to cost U.S. \$500 million annually, Title XIX spending may hit as much as \$1.4 billion. There is informed speculation that generous federal share may be curtailed after November elections, putting more burden on states.

Eli Lilly has filed suit in the U.S. District Court of N.J., alleging trademark infringement by American Vitamin Products of Newark. Suit charges that defendant is imitating Lilly vitamin trade names and seeks both an injunction against further use and treble damages.

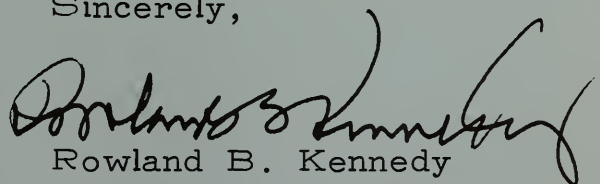
Kentucky has become the first state to require fluoridation as a prerequisite for approval of public water supplies by board of health. Action came with adoption of SBH regulation on recommendation of the Kentucky Dental Association. Two-thirds of Kentucky population in 74 cities already have fluoridated water supplies.

Political motivation for "investigation" of medical care costs by Johnson administration is apparent in action on minimum wage bill. New enactment providing for \$1.60 floor covers 1.5 million hospital workers and will add to rise in hospital care costs as much as \$6 to \$10 per day. While actually underwriting cost rise for hospitals, LBJ's anti-doctor prejudice shows in attack on 3 per cent rise in professional fees.

1966 Diabetes Detection Week, set for Nov. 13-19, will underscore upsurge in prevalence of disease. A million and a half Americans have diabetes, and new cases are turning up at rate of 250,000 per year. Materials for observance of week are free to local medical societies and hospital staffs from American Diabetes Association, 18 E. 48th St., New York 10017.

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Sincerely,



Rowland B. Kennedy  
Executive Secretary



## DATELINE - MEDICAL AMERICA

### Workmen's Compensation Premiums Are Rolled Back

Jackson - Reversing a rising trend established last year, workmen's compensation insurance premiums were dropped back about 6.5 per cent for industrial, manufacturing, and contracting classifications in Mississippi. Highest risk class, logging and lumbering, still carries biggest pricetag of \$19 premium for every \$100 of payroll. Safest job, according to rates, is hosiery manufacture at \$.34 per \$100. Employers with total premium over \$750 annually are experience rated.

### Booming Increase Is Seen In New Schools, Medical Graduates

Evanston, Ill. - The Association of American Medical Colleges reports that 1966 medical school enrollment in the United States totals 32,873, a 55 per cent increase over 1940. The 88 existing approved schools are expected to graduate nearly 7,500 M.D.'s in 1967, but the boom has only begun. With 15 new schools entering operation in the next five years, the number of graduates will grow by 25 per cent.

### AMA Liberalizes Retirement Benefits For Staff

Chicago - Two new features just added to the retirement program for AMA staff members raise the competitive edge for securing and keeping valuable talent. One new benefit provides pensions for surviving widows of staffers who die before retirement, paying up to 40 per cent of benefits for life. A second innovation permits retirement of an employee after 15 years of service at or over age 55 with as much as 100 per cent of benefits. AMA employs nearly 1,000 staff members at the Chicago headquarters.

### Alabama Names SHD As Master Health Planner

Montgomery - The Alabama legislature passed and sent to Gov. Wallace for signature a bill naming the state health department as the agency responsible for drafting a comprehensive health plan. The measure was opposed by a coalition of chiropractors, optometrists, and dentists. SHD will plan for programs designed to take advantage of federal grants with emphasis on Title XIX.

### South Goes Liberal On Javits-Ellsworth Bills

Washington - A nationwide survey by the National Federation of Independent Business shows that American businessmen oppose the Javits-Ellsworth bills, S. 2619 and H.R. 11600, which would return 1 per cent of all federal income taxes collected to the states for use in health, welfare, and education. But the usually conservative deep South, Alabama, Arkansas, Georgia, Louisiana, Mississippi, South Carolina, and Tennessee, had majorities supporting the bills. California and New York, both liberal, had only 34 and 40 per cent respectively for support.





ORIGINAL PAPERS

# Radiation: The Inherent Factor In Our Environment

EVERETT CRAWFORD, M.D.  
Tylertown, Mississippi

TWENTY YEARS AGO last July 16, a man standing at the top of Sandia Mountain saw the sun rise in the south. The atomic age had arrived in a ball of flame on the floor of the New Mexico desert.

But the birth of nuclear medicine, considerably less awesome and spectacular, came half a century before the first sustained chain reaction was achieved in a secret atomic pile under the spectator stands at the University of Chicago's Stagg Field. It was in 1895 that the German physicist, Wilhelm Roentgen, discovered the x-ray. A year later, his French counterpart, Henri Becquerel, demonstrated radioactivity in naturally occurring elements.

Within a few years, x-ray and natural radioactivity were being used—perhaps not too wisely—in medicine. There was, in fact, no scientific understanding at that time as to the origin of ionizing radiation, because the atomic theory and supporting experimental data emerged in the 1930's with the concept of the atom as a nucleus of protons and neutrons surrounded by shells of orbiting electrons. And once scientists began to understand the atom, they began to suspect that they could split it.

In this astonishing succession of events, motivated and urged by scientific curiosity and the

necessities of war, radiation has become an inherent factor in man's environment. In the brief span of just two generations, we have come to live amid the hazards and benefits of a strange force which was not understood when many of us were graduated from high school.

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*"The opportunity is ours today to prepare for these responsibilities of tomorrow." This is the thesis of Dr. Crawford's address which keynoted the Symposium on Nuclear Medicine. In it he discusses the scope and potential of nuclear technology and its probable place in the world of a century from now.*

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Part of the purchase price for scientific and technological achievement has been the polluting of our environment with all sorts of deadly substances. Not too many decades ago, major air pollution problems consisted of a whiff of methane gas when the wind blew from the swamp or the transitory annoyance of a burning forest.

Today, the water we drink, the air we breathe, and the earth under us all contain substances which, if not hazardous to health and life, are at least undesirable. Yet, they are byproducts of progress, because agricultural chemicals help us to

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President, Mississippi State Medical Association, 1965-66.  
Read before the Symposium on Nuclear Medicine, 98th Annual Session, Mississippi State Medical Association, Jackson, May 11, 1966.

## RADIATION / Crawford

an uncomfortable abundance, the products of combustion attest to the complete mobility of society, and the murky river flows below the industry which makes basic and consumer goods for an unparalleled standard of living.

This ecological dichotomy isn't all bad, but it is raising serious questions in the scientific community, in the halls of government, and even among academicians who study the characteristics and behavior of society. We concede that there are new and unusual factors in our environment, and radiation is one with which we shall have to reckon.

## LIFE SCIENCE PROGRESS

It has been observed that the biological sciences, now projected into the exciting realm of nuclear technology, will produce advances in the next generation that will dwarf the atomic bomb. As a matter of practical attainment, these life science achievements in the next decade may surpass those made in physics in the 1935-45 decade. If this be true—and there is no reason to doubt it—then man shall have turned his most destructive weapon into his most capable servant.

It is obvious that the scope and potential of nuclear technology extend into many more areas of interest than those of the life sciences. We need no science fiction writer to tell us that a century from now, our chief power source will be atomic, bringing undreamed-of ease and abundance to our great grandchildren. This unborn generation's problem isn't the task of unfolding this evolution of technology; it is the task of staying alive and intact as a civilized society to reap the benefits of the force which can just as easily destroy them.

## CHANGES TO COME

As the chemotherapeutic revolution has changed the face of modern medicine, so will change come as all disciplines apply the developing techniques of radiation to clinical and research endeavors. For example, the geneticists would be far behind their present timetable of progress in making DNA yield up its secrets were it not for radioisotopes.

Tomorrow's nuclear physicist will be a man of many talents and widely divergent scientific and professional interests. It is not unreasonable to suppose that his special skills will identify him as

a medical specialist, too. He is learning more every day with his sophisticated particle accelerators as he fathoms the mysteries of atomic anatomy and physiology, and the fruits of his investigations are quickly finding their way into the medical research institution and on to the bedside of the patient.

We will look to this new breed of scientist not only for these positive clinical contributions but also toward his safeguarding the symbiotic balance from the side effects of his handiwork. We will find him active in the rapidly broadening fields of environmental nuclear medicine, in industrial or occupational nuclear hygiene, in the familiar established disciplines we identify as the medical specialties, particularly among our colleagues in radiology whose field of interest is rapidly expanding and whose importance to medicine cannot be underestimated.

In directing the attention of a preponderantly clinical group's attention toward nuclear medicine, we are not addressing ourselves to a faraway scientific curiosity nor to a field in which we are devoid of responsibility. In 1960, the Congress amended the Atomic Energy Act to permit states which are willing and able to assume both control and licensure of sources of ionizing radiation with the exception of critical masses. Mississippi was the second state in our nation to conclude such an agreement with AEC, and assignment of this responsibility has been lodged with our State Board of Health.

## OUR CHALLENGE

So for half a decade now, the medical profession in Mississippi has been both directly and indirectly involved in this vital area of concern. We must not wrongly or precipitately conclude that these responsibilities will not increase. On the contrary, we physicians actively seek a greater role in nuclear technology, but we will be competent to do so only if we prepare ourselves for the responsible discharge of these opportunities for service.

It was with these thoughts and aspirations in mind that our Council on Scientific Assembly undertook the ambitious task of bringing together these respected and internationally known authorities. It is in this serious and challenging context that we invited ourselves to be stimulated toward further attainment in presenting this symposium.

The opportunity is ours today to prepare for these responsibilities tomorrow. ★★★

Walthall Hospital



# Role of the Atomic Energy Commission In Biomedical Research

H. D. BRUNER, M.D.  
Washington, D. C.

THE ATOMIC ENERGY COMMISSION was formed in 1946 to carry on the work of the wartime Manhattan Engineering District and the objectives of the program shifted to the introduction and development of nuclear energy in our peacetime national economy. With the passage of years, the activities of the commission have enlarged until the responsibilities of the commission now extend into nearly every critical facet of our national life. But in the matter of Health and Safety, the commission is determined that our daily association with nuclear energy shall be carried out in a safe, responsible manner.

The word "safe," as just used, has direct reference to man and his environment, since living things seem to be least resistant to radiations. And so, in order for the commission to carry out its mission, it must be as fully informed as is possible about the dose-effect relationships between radiation and living things. This in turn implies an ever-growing body of information on the mechanisms of interactions of radiations with tissues, cells, and molecules.

Within the commission, our division, the Division of Biology and Medicine, has been assigned this responsibility. As you might imagine, it is an open-ended task, for everything that is learned immediately leads to just that many more questions. It is a completely fascinating scientific adventure in that research on the effects of radiations on living things cuts across all of the conventional biomedical disciplines. In addition, it frequently leads the biomedical scientist into un-

expected avenues of research such as meteorology, geochemistry, electronics, cybernetics, and many others. In short, there is never a dull moment for the scientist who works in radiation biology or nuclear medicine. More to the point, however, is the fact that studies on radiation and the use of radioisotopes have been responsible for many major advances in the biomedical sciences in recent years.

As it happens, medicine was the first of the sciences to put artificial radioactivity directly to

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*With the passage of the years since its formation in 1946, the Atomic Energy Commission has assumed responsibilities extending into nearly every critical facet of national life. But, states the author, the commission is determined that the daily association with nuclear energy shall be carried out in a safe, responsible manner. He reviews the work of his division in this regard.*

---

work for the benefit of mankind. By reason of long acquaintance with x-rays and radium for diagnosis and therapy, it was natural that physicians were eager to investigate the clinical and research uses to which these new particles and radioisotopes might be put. The 20 years since the war have seen "nuclear medicine" become a recognized part of the practice of medicine and in the process a great deal has been learned about the effects of radiations on man. Such rapid advances could hardly have taken place without federal support from agencies such as our Division of Biology and Medicine, and others.

The mission of our division, briefly, is threefold: (1) To learn what are the effects of radia-

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Assistant Director for Medical and Health Research, Division of Biology and Medicine, U. S. Atomic Energy Commission.

Read before the Symposium on Nuclear Medicine, 98th Annual Session, Mississippi State Medical Association, Jackson, May 11, 1966.

## ROLE OF AEC / Bruner

tions on living structures and on their ecological relationships. Always in the background, if not specifically in the foreground, is concern for man and his reactions to irradiation. (2) To learn what can be done to counteract or modify these effects of radiations. (3) To find how radiations and radioactivity can be put to use for the benefit of mankind.

While our mission may thus seem to be without boundaries, the division's research programs are carefully drawn up. As shown in the following three slides, 14 areas of interest are identified together with the per cent of our total effort. The first six include:

	<i>Per Cent</i>
Molecular and cellular level studies .....	18
Radiation genetics .....	8
Somatic effects-general .....	17
Toxicity of radioelements .....	10
Environmental radiation studies .....	10
Radiological physics .....	3

These account for about two-thirds of our research effort. In these six categories are the researches which are intended to identify and analyze the effects of radiations on a wide range of biomedical systems. In character they range from the very fundamental to the pragmatic; there is need for both kinds of study and the range in between.

The broad nature of biomedical studies in nuclear energy generally requires a team effort: such a team is likely to have both fundamental and pragmatic interests, a combination which

works out to everyone's advantage.

The next six areas are investigations of the practical health and safety problems encountered in the development of nuclear energy.

	<i>Per Cent</i>
Health physics .....	2
Radiation instruments .....	3
Combating detrimental effects of radiation ....	3
Chemical toxicity .....	1
Nuclear energy civil effects .....	2
Atmospheric radioactivity and fallout .....	11

Twenty-two per cent of the program is devoted to these areas of research.

It is difficult to picture for you the wide range of completely unconventional biomedical problems encompassed within these six categories. Let me say simply that they are as extraordinary as the nuclear energy activities which generate them. This is the place for investigators with a taste for variety, for the unexpected, for the broad field of science instead of a single discipline.

The remaining two areas, cancer research and selected beneficial applications, account for 7 per cent and 4 per cent, respectively, of the total effort. Here the main interests lie in the application of theoretical and practical knowledge about radiations and isotopes for the solution of medical problems. In the beginning, there were numerous medical situations to which nuclear techniques could be directly applied. With the passage of time, however, we have found that applications intended for a given medical problem must be developed *de nova*, from basic theory on through to the specific studies in man. ★★★

U. S. Atomic Energy Commission (20545)

## FINANCIAL FINALITY

The perplexed physician, receiving his CPA's request to check the bank statement for tax purposes, didn't see the unintentional humor in the typographical error: "Please review the enclosed statement, compare it with your bank balance, sigh, and return to me."



# Radioisotope Lung Scanning in Pulmonary Disease

G. V. TAPLIN, M.D.; E. K. DORE, M.D.; N. D. POE, M.D.;  
L. A. SWANSON, M.D.; D. E. JOHNSON, M.D.,  
and A. GREENBERG, M.D.  
Los Angeles, California

PRIOR TO NOVEMBER 1965 it was not possible to have a lung scan performed in most hospitals in this country because the test material was not available commercially. Now that the federal regulatory agencies have approved radioalbumin macroaggregates (RAMA) for clinical use, it seems appropriate to acquaint the medical profession with the measurement of pulmonary arterial blood flow or perfusion by chest scanning following intravenous injection of this new radio-diagnostic agent.<sup>1, 2, 3, 4</sup>

Lung scanning with RAMA provides objective information not only on pulmonary arterial perfusion of the lungs, but more importantly on regional ischemia and associated impairment of function. In the diagnosis of pulmonary embolism without infarction, the perfusion scan displays the cardinal feature of this disease, namely, pulmonary ischemia of an entire lung, a lobe or segment and thereby points to the site and size of the artery occluded.<sup>5, 6, 7</sup> It reveals this critical information approximately nine times more often than conventional roentgenography of the chest.

Because of its relative safety and simplicity, it is useful for following the course of pulmonary embolism and other diseases, such as pulmonary tuberculosis, which affect the arterial blood supply. Furthermore, since ischemic lung tissue cannot carry out normal gas exchange, the perfusion scan is a useful adjunct to routine pulmonary

function testing in chronic bronchopulmonary disease by localizing the approximate amounts of malfunctioning (ischemic) versus normal lung tissue.<sup>8</sup> It aids the radiologist in interpretation of chest films in pulmonary disease by demonstrating the functional significance of structural defects. As a screening test for pulmonary angiography, it points to the region where selective procedures should be performed.<sup>8</sup>

---

*Lung scanning with radioalbumin macroaggregates (RAMA), state the authors, is an exceptionally safe, convenient and reliable procedure for measuring relative pulmonary arterial blood flow or perfusion of the lungs and for detecting regional pulmonary ischemia and associated impairment of function. Its most important application is in the early diagnosis of pulmonary embolism, they write. They discuss the measurement of pulmonary arterial blood flow or perfusion by chest scanning following intravenous injection of RAMA.*

---

This paper describes the principle and current techniques of lung perfusion scanning and assesses its safety and clinical usefulness from experience in more than 1,500 patients.

The <sup>131</sup>I albumin macroaggregates (RAMA) used in these studies was supplied mainly by E. R. Squibb and Sons. It is prepared from an 0.1 per cent solution of high specific activity human serum albumin <sup>131</sup>I (about 1,000  $\mu$ C <sup>131</sup>I/mg albumin), adjusted to pH 5.5 and heated for 20 minutes at 79° C. The mean size of the aggregates is approximately 15  $\mu$  but their sizes range from

---

From the Laboratory of Nuclear Medicine and Radiation Biology, Department of Biophysics-Nuclear Medicine, School of Medicine, University of California at Los Angeles, and from the Nuclear Medicine Divisions of the Los Angeles County Harbor General Hospital, Torrance, and Olive View Hospital, Olive View, and the Memorial Hospital of Long Beach.

Read before the Symposium on Nuclear Medicine, 98th Annual Session, Mississippi State Medical Association, Jackson, May 11, 1966.

a few to 70  $\mu$ . However, less than 10 per cent exceed 50  $\mu$ .

Picker Magnascanners Models III and V with three and five inch diameter sodium iodide crystals and with 7 and 19 hole focusing collimators respectively were employed.

Pulmonary arterial blood flow can be measured semiquantitatively by lung scanning with RAMA on the principle of temporary arteriolar blockade.<sup>9</sup> With any substance which is removed from the blood with high efficiency (90 per cent or greater) on the first passage through the lung, the amount retained in any given region is proportional to blood flow or perfusion, provided the material remains at the sites of initial entrapment during the period of examination. Ten to 70  $\mu$  size macroaggregates, too large to pass the arteriolar capillary bed, are trapped immediately and removed slowly with half times ranging from 4-8 hours. As opposed to solid inorganic ceramic microspheres,<sup>10</sup> which are permanently retained at the sites of entrapment, albumin macroaggregate are each composed of myriads of loosely bound sub-micron size particles (see Figure 1). They are removed from the arterioles by cellular bombardment, plasma erosion and by backward and forward movement until they become fragmented or molded into elongated shapes small enough to traverse the distal arteriolar bed.<sup>11</sup>

### LUNG SCAN PATTERN

The lung scan image represents the pattern of pulmonary arterial blood flow or perfusion which existed at the time of tracer injection. Normally, flow is quite uniform throughout the lung fields

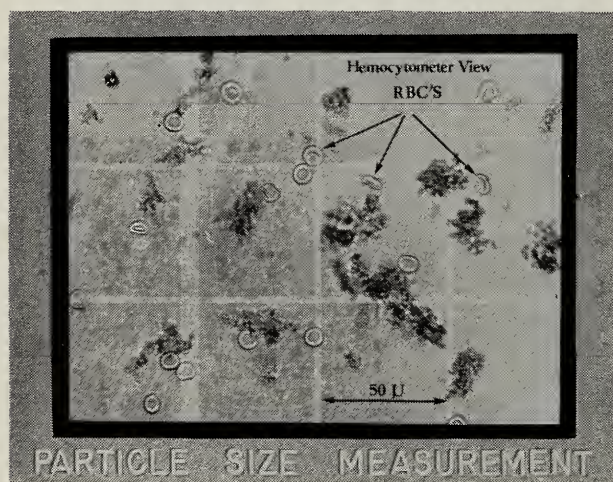


Figure 1. A size comparison of red blood cells with radioalbumin macroaggregates as viewed under high power in a hemocytometer.

except at the apical regions. Blood flow is dependent upon posture and is always greater to the dependent portions of the lung. Arterial occlusion produces regional ischemia and areas of greatly reduced radioactivity in the scan image (Figure 2).

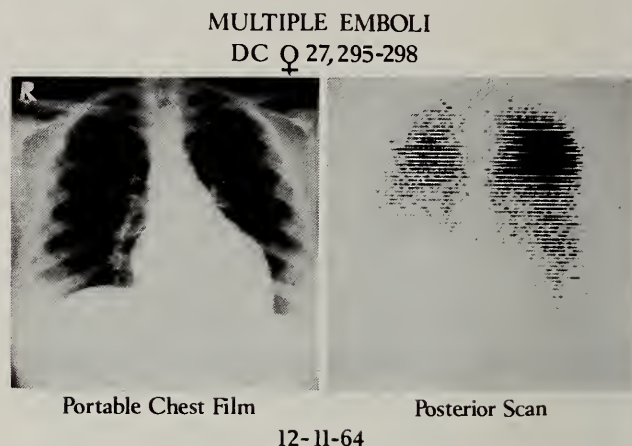


Figure 2. Chest x-ray and perfusion lung scan of a 27-year-old woman with recurrent thrombophlebitis taken three days post partum. Multiple emboli were found at autopsy in both lower lung fields.

In scanning with high specific activity RAMA suspensions, usually less than 2 million aggregates larger than 10  $\mu$  are injected. At least half of these are smaller than 20  $\mu$  and less than 10 per cent are larger than 50  $\mu$ .<sup>8</sup> It is estimated that no more than 20 million capillary units are blocked for a few hours even when one considers that the larger aggregates in the suspension may occlude larger arterioles and block multiple capillary units. However, since the average number of capillary units is known to be 280 billion in man,<sup>12</sup> less than one in 10,000 units are involved and blood continues to flow normally through the 279.8 billion patent vessels. These circumstances explain why there is no measurable effect on pulmonary hemodynamics until the dose of aggregates is increased more than 1,000 fold from the usual scan dose of 5-10  $\mu$ g/kg to the minimum toxic dose in the dog of about 20 mg/kg.<sup>8</sup>

### PREPARATION FOR SCAN

Prior to injection of RAMA, sufficient sodium iodide or perchlorate is administered orally to minimize subsequent radioiodine accumulation in the thyroid gland. The patient may be scanned while lying in the prone, supine or lateral position on a well-cushioned examining table or bed. The RAMA suspensions should be shaken vigorously just prior to injection to re-suspend the sedimented particles. The injection should be made



slowly (10-15 seconds) to insure adequate mixing in the blood and uniform distribution in the lungs.

Scanning may be started immediately after tracer injection. When the area of major interest is in the lower lung fields as in pulmonary embolism, the injection is made with the patient sitting upright. In photoscanning, no contrast enhancement is needed, because areas of reduced perfusion (as in pulmonary embolism) have radioactivity levels 5-30 times below the normal surrounding tissues. Scan doses of 150-300  $\mu$ c of RAMA are adequate and the amount of carrier albumin need not exceed 15  $\mu$ g/kg.

### POSITIONING THE PATIENT

In patients who are unable to lie in the prone position because of respiratory distress, an anterior scan is performed and thereafter one or both lateral views are obtained, depending upon the anterior scan results. Lateral views are indicated particularly when abnormalities are found in the lower lung regions. The costophrenic regions and posterior segments of the lower lobes are well outlined and in the right lateral view the middle lobe is best visualized (Figure 3).

The most important clinical application of lung perfusion scanning is in the early diagnosis of pulmonary embolism without infarction. In such

### VISUALIZATION OF RIGHT COSTOPHRENIC REGION

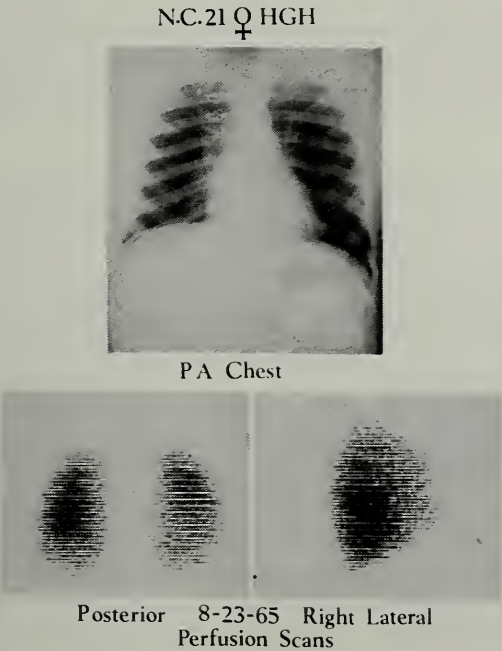


Figure 3. Demonstration of how the right lateral lung scan gives better visualization of the costophrenic region than the routine posterior scan.

### MASSIVE PULMONARY EMBOLISM

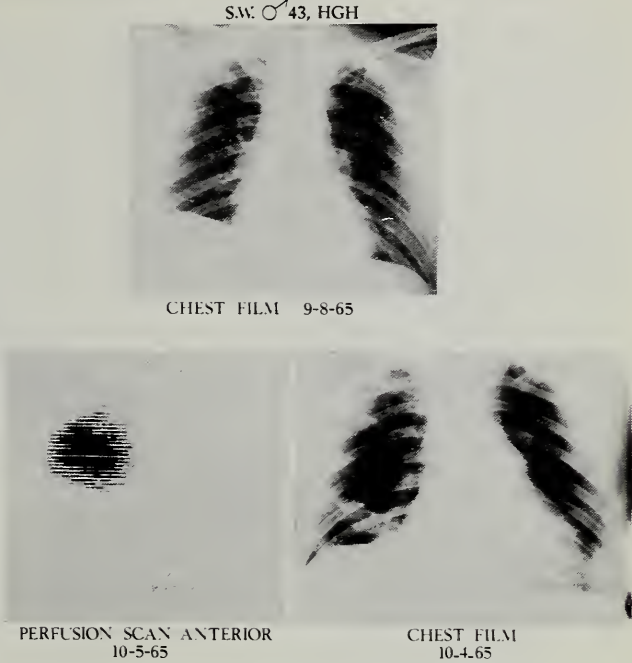


Figure 4. Chest films approximately one month apart and an anterior perfusion scan in a 43-year-old male with massive pulmonary embolism confirmed at operation. The elevated diaphragm in the initial chest film suggests previous embolism to the right lower lung prior to the fatal attack.

cases the scan points to the site and size of the arterial obstruction before conventional chest films show any diagnostically recognizable abnormality (see Figure 3). Thus, in patients suspected of pulmonary embolism, who have negative chest films but positive scan evidence of segmental or lobar arterial obstruction, the scan indicates with a high degree of probability that pulmonary embolism has occurred. However, the lung scan image by itself has no diagnostic significance. It is merely a pattern of pulmonary arterial perfusion and must be interpreted in the light of the clinical history, laboratory findings, chest roentgenograms and occasionally with the pulmonary angiogram. Roentgenography of the chest is necessary because numerous cardiac and pulmonary diseases can at one time or another produce regional ischemia indistinguishable from that seen in pulmonary embolism (Figure 4).

### EXTENT OF SERIES

Scans were performed in conjunction with conventional roentgenography in more than 400 patients with suspected pulmonary embolism. Most of these were within the age group of 25-75 in whom the predisposing causes included thrombophlebitis, fractured extremities, pre-existing

cardiopulmonary disease and major upper abdominal operations. In about one-third there was no apparent cause other than hospitalization and enforced bed rest for some unrelated disorder.

One hundred twenty-five patients' perfusion scans showed ischemia of an entire lung, a lobe, a segment or smaller regions together with laboratory evidence and roentgenographic findings sufficient to make a positive clinical diagnosis. Pulmonary arterial obstruction was verified either at autopsy, surgery or by pulmonary angiography in 25 individuals. In five patients with massive pulmonary embolism, findings at autopsy correlated well with the scan data regarding the location and size of the embolic lesions (Figure 5). In 18 instances scan results were confirmed by pulmonary angiography (Figure 6). In three patients with suspected minor embolic episodes, serial scans showed multiple small areas of ischemia in the face of negative chest films and pulmonary angiography (Figure 7).

In the 125-well documented cases, lung scanning demonstrated regional pulmonary ischemia

approximately nine times more often than conventional roentgenography. There were only 14 patients with roentgenographic evidence of pulmonary infarction, and in 11 of these there was pre-existing cardiopulmonary disease. Most patients with ischemia involving as much as 30-60 per cent of the lung had little or no clinical manifestations. Scans were requested in these patients because of predisposing disorders and/or minimal symptoms or signs suggestive of recent or recurring minor embolic episodes.

## EMBOLISM STUDIES

Thirty patients with uncomplicated pulmonary embolism were studied throughout the course of the disease with repeated scans and chest x-ray examinations to determine the rate of blood flow restoration. Patients with heart failure, pleural effusion, pulmonary infarction and parenchymal disease were excluded to simplify analysis of the scan data. Recovery rates in such patients are presented later.

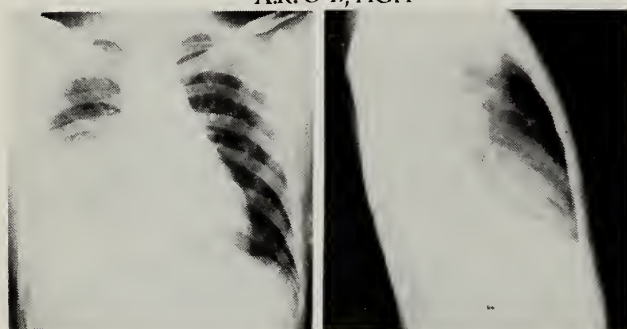
Another group of 40 relatively uncomplicated cases were studied until the diagnosis was established but were lost for various reasons from the follow-up series. The remaining 55 positive cases included five deaths from massive embolism, three with nonfatal multiple small emboli and 45 with various complicating disorders as previously described.

## CATEGORIES OF CASES

**Uncomplicated Cases (30):** When emboli obstructed vessels supplying an entire lung or one or more lobes (14 patients), blood flow was restored within 4-17 days in nine and by 3-6 weeks in the remaining five (Figure 8). Twenty patients had one or more segmental emboli. Half showed rapid recovery as with lobar lesions. The remaining frequently showed little or no improvement for several weeks and in one individual the defect persisted for 14 months. Eight patients had subsegmental lesions and in these recovery time varied from three days to six weeks. The number of lesions greatly exceeds the number of patients because most individuals had multiple emboli of different sizes. Only one person had a single embolus, a subsegmental lesion.

**Complicated Cases (45):** The rate of recovery in this group varied widely but was generally much slower (two weeks to several months), particularly in the 14 patients with roentgenographic evidence of lung infarction (Figure 9). Furthermore, it was neither possible nor advisable to examine this group at frequent intervals. Therefore,

LOBAR PNEUMONIA, R.L.R.  
A.R. 17, HGH



PA Chest Film

Right Lateral Film

Posterior Scan

Right Lateral Scan

4-23-65

Figure 5. Posterior and right lateral chest films and perfusion scans in a 17-year-old male with right lower lobe pneumonia in the stage of frank consolidation.



# PULMONARY EMBOLISM STUDY

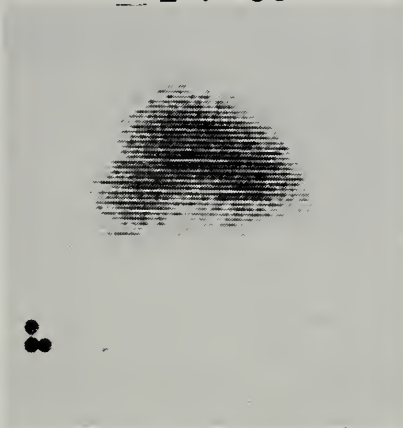
E.T. ♂ 40, HGH

Lung Scans

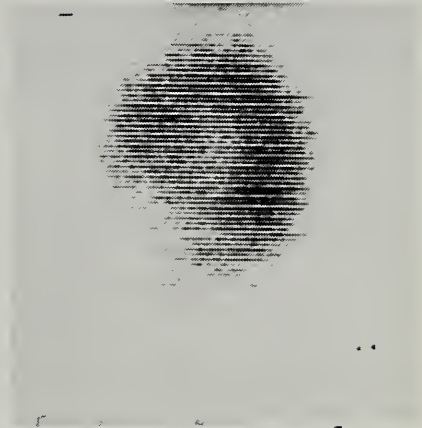
2-14-66



Posterior

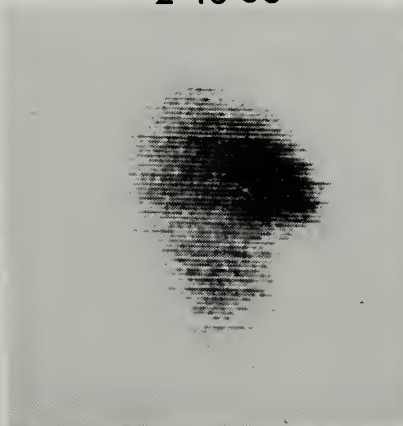


Right Lateral

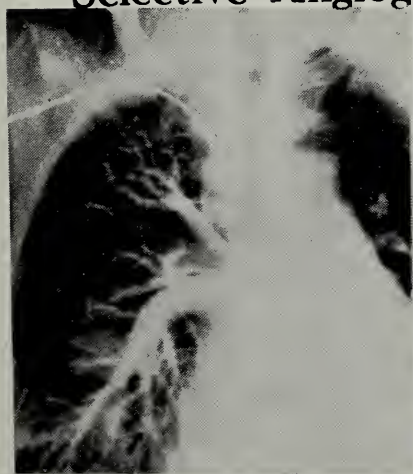


Left Lateral

2-18-66



Selective Angiography 2-18-66



Chest Film

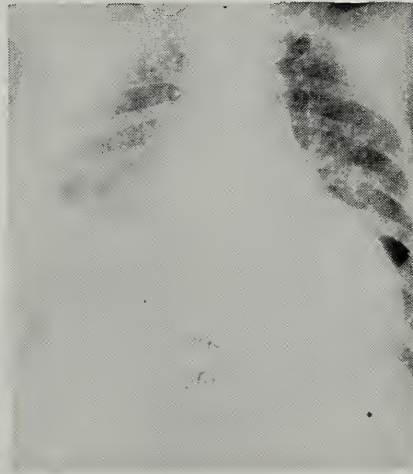


Figure 6. Repeated posterior and lateral scans together with chest film and right anterior and lateral selective pulmonary angiograms from a 40-year-old

male with pulmonary infarction of the right middle and lower lobes. The diagnostic value of all three procedures are demonstrated.

## ISOTOPE SCANNING / Taplin et al

the data permit general statements only. The incidence of such symptoms and signs as hemoptysis, tachypnea, tachycardia, pleuritic chest pain and syncope were far more frequent in those with lung infarction and pre-existing congestive heart failure than in the uncomplicated group. Likewise, cardiorespiratory symptoms were more frequent and generally out of proportion to the amount of ischemic lung demonstrated by scanning.

### SCAN AS A SUPPLEMENT

In patients with emphysema and/or chronic pulmonary tuberculosis, the scan locates the ischemic malfunctioning parenchyma and thus supplements conventional pulmonary function tests by disclosing the approximate amounts and location of normal versus malfunctioning lung.

In the 500 chronic pulmonary tuberculosis patients studied, good correlation exists between conventional chest films and perfusion scans in most instances. Areas of parenchymal disease displayed in roentgenograms are usually associated with impaired perfusion, particularly in patients with chronic fibrotic lesions (Figure 10). However, there are frequent discrepancies wherein the scan either indicates much poorer perfusion than one would predict from the chest x-ray or vice versa. For example, tuberculosis involving the hilar region can cause pulmonary artery thrombosis. Three patients of this type had relatively little parenchymal disease roentgenographically, but the scans showed complete absence of pulmonary arterial perfusion to an entire lung.

At operation in one case, left pulmonary artery thrombosis was demonstrated (Figure 11). The opposite situation, wherein the roentgenographic findings indicate extensive disease but the scan re-

## MULTIPLE PULMONARY EMBOLI

M.G.56 ♀, HGH

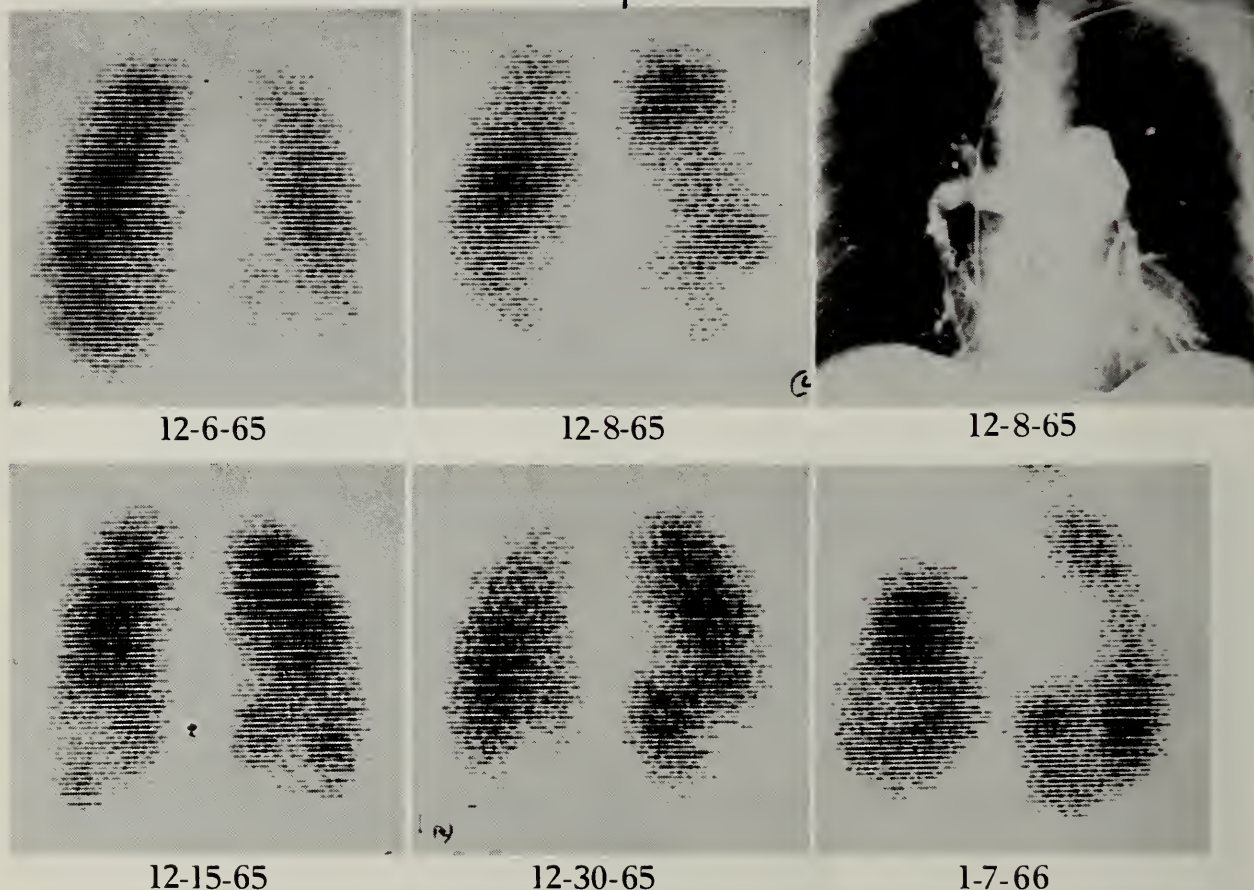


Figure 7. Repeated posterior perfusion scans and pulmonary angiogram of a 56-year-old woman with acute thrombophlebitis but no signs or symptoms of pulmonary emboli. The angiogram was considered

normal but the multiple areas of ischemia in the scans and their changing location with time are highly indicative of recurring emboli.



# PULMONARY EMBOLISM STUDY

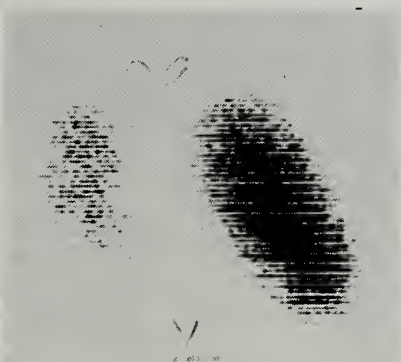
J.S. 52 ♂, HGH

PA Chest Films

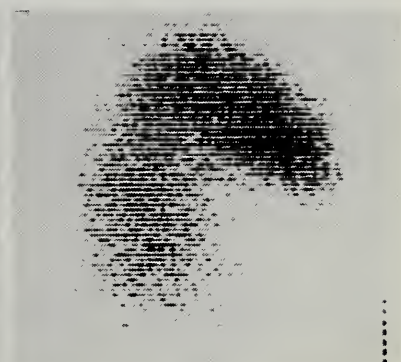
Perfusion Scans



10-14-65



Anterior



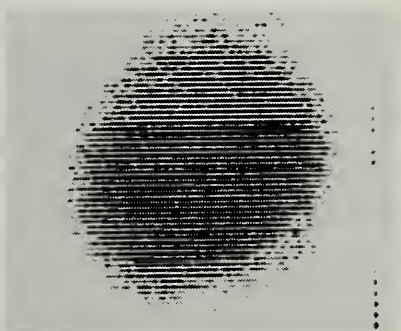
10-14-65 Right Lateral



10-21-65



Anterior



10-21-65 Right Lateral

Figure 8. Demonstration of the value of the lateral lung scans in detecting embolic lesions of the right

middle lobe.

veals relatively normal perfusion, has been found on several occasions, particularly in patients with relatively acute lesions of more peripheral distribution (Figure 12). These findings may be analogous to those in the early congestive stages of acute lobar or bronchial pneumonia. However, long-term serial studies are needed to determine the changing perfusion patterns in both chronic and acute tuberculous lesions of the lung.

In comparing the results of standard pulmonary function tests and perfusion scans of 50 patients with mild to extensive pulmonary tuberculosis the perfusion scan is a helpful adjunct to the function tests. It indicates the functional status (perfusion) of the disease tissue, provides an estimate of the relative amounts of normally and abnormally perfused lung and can detect areas of poorly functioning (ischemic) lung which are not recognizable radiographically (see Figure 13). Qualitatively, there is good correlation between the scan findings and results of pulmonary func-

tion tests in patients with extensive parenchymal disease. However, more than 25 per cent of total lung tissue may be diseased and poorly perfused while results of standard function tests remain within normal limits (see Figure 14). On the other hand, pulmonary function tests may be distinctly abnormal when the perfusion scan is apparently normal—as in chronic obstructive bronchopulmonary disease. This situation occurs frequently when ventilatory abnormalities exist (Figure 15). Thus, in the functional evaluation of patients with various pulmonary disorders, all available procedures are necessary. However, the perfusion scan not only adds new information but is helpful in interpreting the results of conventional function tests and chest roentgenograms.

Until the advent of lung perfusion scanning in 1963<sup>10</sup> the diagnosis of pulmonary thromboembolism even of the main arteries or their major branches was difficult because there was no simple diagnostic test for regional pulmonary ischemia,

the cardinal feature of this disease. The clinical picture is seldom typical and may be confused with coronary occlusion, bacterial pneumonia, post-operative pneumonitis, or atelectasis, heart failure, fever of unknown origin or syncope. Symptoms and signs include tachypnea, tachycardia, circulatory collapse, pleuritic pain, angina from reduced coronary blood flow and pulmonary edema from left ventricular failure.<sup>13</sup> These disturbances occur almost exclusively with major embolic episodes or in patients with pre-existing cardio-pulmonary disease. The great majority of emboli give far less distinctive manifestations or none at all.<sup>14</sup>

### EARLY EMBOLISM DIAGNOSIS

Lung perfusion scanning gives the critical information needed in the early diagnosis of pulmonary embolism, particularly in those patients without lung infarction. It demonstrates pulmonary ischemia of an entire lung, a lobe, a segment and sometimes of smaller areas and points to the site and size of the artery occluded. Therefore, regional ischemia in the scan, together with a negative chest roentgenogram, indicates pulmo-

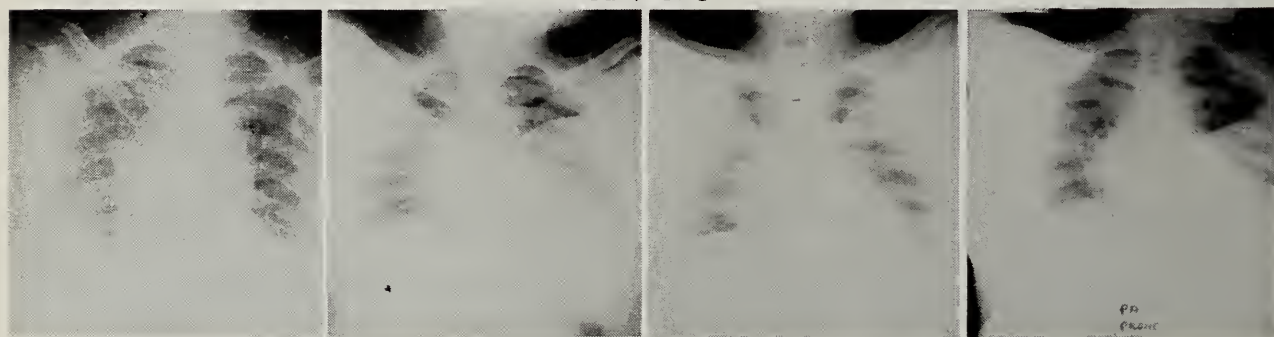
nary embolism with a high degree of probability.<sup>8</sup> However, scans and roentgenographic procedures are necessary because numerous cardiac and pulmonary diseases can at one time or another produce regional ischemia which is difficult to distinguish from that of pulmonary embolism. Fortunately, in complicated cases wherein the diagnosis is more difficult the combined use of serial roentgenographic and scanning examinations can usually lead to the correct diagnosis.

Evidence is accumulating rapidly that the perfusion scan in its present relatively crude form is a more sensitive detector of multiple small emboli than conventional angiography even when it is performed by the latest catheter techniques. The reason for this greater sensitivity becomes apparent when one realizes that the diameter of an ischemic lesion produced by a small thrombus may be as much as 25 times larger (50 mm.) than that of the 2 mm. diameter vessel occluded. Results suggest strongly that patients with conditions which predispose to pulmonary embolism should be scanned on the slightest indication because most instances of fatal embolism are preceded by minor nonfatal episodes.<sup>14</sup>

Conceivably, the early recognition and proper medical management of these *signal emboli* could

## PULMONARY EMBOLISM STUDY SERIAL X-RAY FILMS & PERFUSION SCANS C.H.Q 57, HGH

### PA Views



### Anterior Views

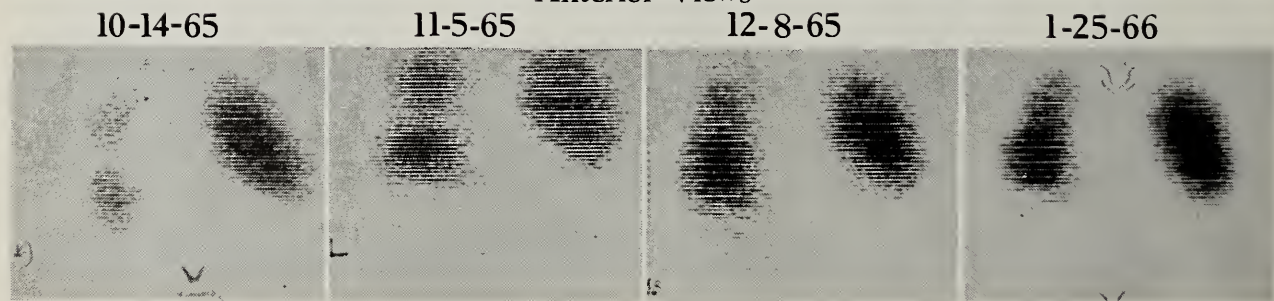


Figure 9. Serial chest roentgenograms and anterior scans during recovery from pulmonary embolism in a 57-year-old cardiac.



lead to the prevention of a large proportion of fatal attacks which are now reported to cause approximately 47,000 deaths per year in this country.<sup>15</sup> With future advances in scanning instrumentation and test material, even more of these minor embolic episodes may be recognized, particularly those which are known to occur in cardiac patients. Their early recognition and treatment could possibly prevent the development of pulmonary hypertension and subsequent right heart failure.

SAFETY OF RAMA

Based on our experience in 1,500 patients and that of other investigators,<sup>16, 17, 18</sup> particularly the Johns Hopkins group,<sup>19, 20, 21</sup> in at least 3,000 cases, currently available macroaggregates of albumin <sup>131</sup>I are safe for lung scanning in man. No immediate hemodynamic reactions were encountered even in seriously ill patients. No allergic reactions were observed in more than 50 individuals who had serial examinations made over periods ranging from 3 weeks to as long as 14 months. The main situation where special precautions seem indicated is in patients with known pulmonary hypertension who are in severe respira-

FAR ADVANCED PULMONARY TBC  
Anterior And Posterior Scans  
Show Marked Difference In Perfusion

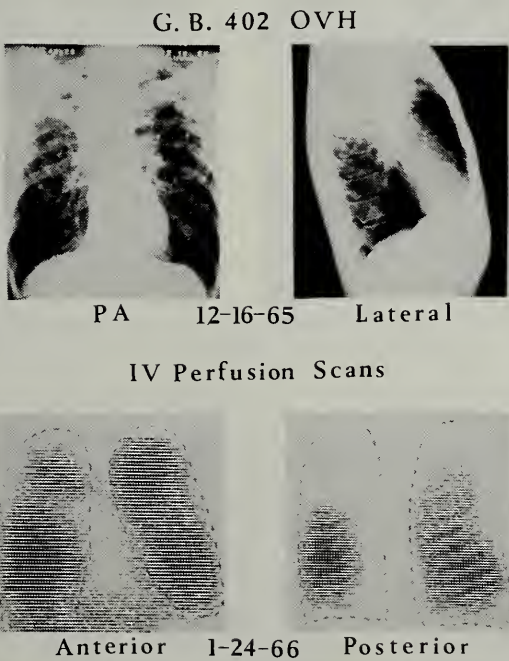


Figure 10. Chest x-ray films and anterior and posterior perfusion scans in advanced pulmonary tuberculosis. The diseased lung on the right is poorly perfused posteriorly. The left upper lung is better perfused than one would predict by roentgenography.

APICAL TUBERCULOSIS &  
LEFT PULMONARY ARTERY THROMBOSIS

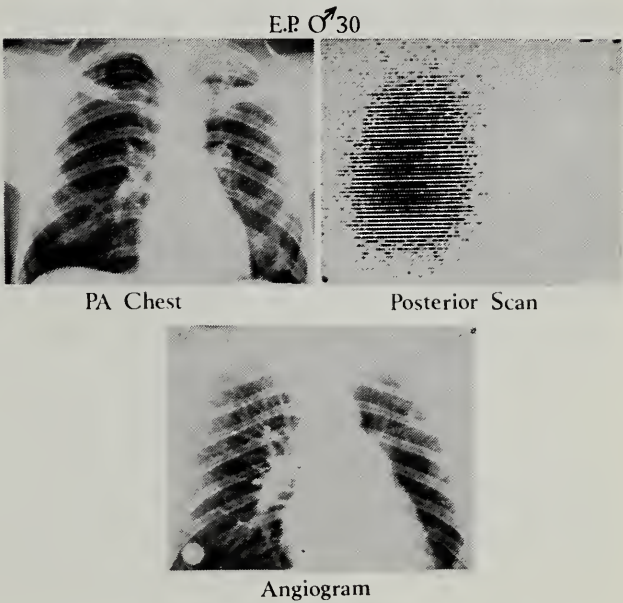


Figure 11. The chest film posterior scan and angiogram of a 30-year-old male with apical tuberculosis and unsuspected left pulmonary artery thrombosis confirmed at operation.

tory distress. In such individuals, the slight additional stress of temporary arteriolar blockade with RAMA might conceivably cause an acute hemodynamic reaction. However, pulmonary angiography would be far more dangerous. Before performing either procedure under such conditions, emergency resuscitation equipment and supplies should be readily available.

RELIABILITY OF RAMA

Lung perfusion scanning with RAMA is an exceptionally safe, convenient and reliable procedure for measuring relative pulmonary arterial blood flow or perfusion of the lungs and for detecting regional pulmonary ischemia and associated impairment of function. Its most important application is in the early diagnosis of pulmonary embolism, particularly in the great majority of patients in whom lung infarction does not occur. It demonstrates regional pulmonary ischemia, the cardinal feature of this disease. Therefore, ischemia of an entire lung, a lobe, a segment and sometimes of smaller regions, together with a negative chest roentgenogram indicate pulmonary embolism with a high degree of probability.

Lung perfusion scans were positive approximately nine times more often than conventional chest roentgenograms in 125 patients with well-documented evidence of pulmonary embolism. Scans were positive in three patients with multiple

## ISOTOPE SCANNING / Taplin et al

small emboli in the face of negative angiographic findings. Scanning is useful for following the course of pulmonary embolism and other diseases which cause impairment of the pulmonary arterial circulation. It demonstrates the functional status (degree of perfusion) of localized disease and is therefore a valuable adjunct to routine pulmonary function testing. It serves another important purpose as a screening procedure for pulmonary angiography and alerts the radiologist to the affected region before his performance of routine or selective studies.

### PERFUSION SCANNING

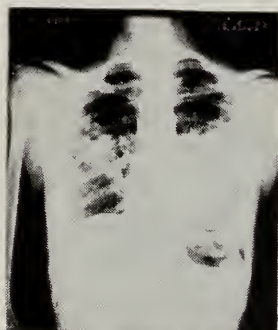
Lung perfusion scanning gives the physician semiquantitative measurements of pulmonary arterial blood flow and function to all parts of the lung simultaneously. Previously, no simple, safe

procedure disclosed all this information. Pulmonary angiography gives clear images of the pulmonary vascular structures but only indirect evidence of blood flow abnormalities. Differential spirometry permits functional comparison of one lung with the other but does not indicate disturbed function regionally, either in one lung or in direct association with localized disease. The perfusion scan provides such information but has no diagnostic significance by itself. Its value comes from correlating scan results with those of other procedures. Used in this way, lung scanning has facilitated the early diagnosis of pulmonary embolism and has advanced the understanding of its natural course. It augments current methods for evaluating pulmonary function and aids the thoracic surgeon. Conceivably, lung scanning could prevent a large proportion of fatal attacks from massive pulmonary embolism in the future, by early recognition and proper treatment of small

## FAR ADVANCED TUBERCULOSIS IMPROVING

### Perfusion Good in Early Stage of Disease

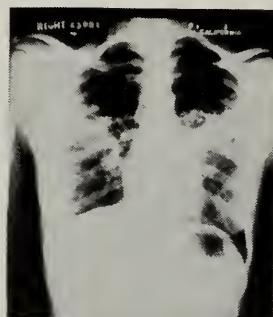
R. B. 381



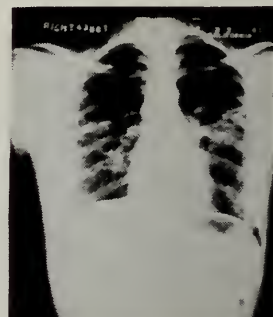
12-2-65



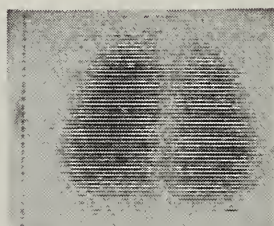
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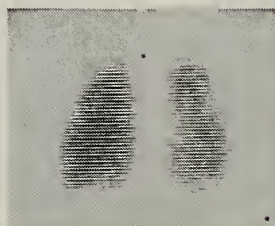
1-3-66



3-3-66



Posterior 12-7-65



Posterior 2-24-66



Left Lateral  
2-24-66

Figure 12. Serial x-rays and perfusion scans in advanced tuberculosis. Perfusion was surprisingly good at the onset of treatment in December 1965.

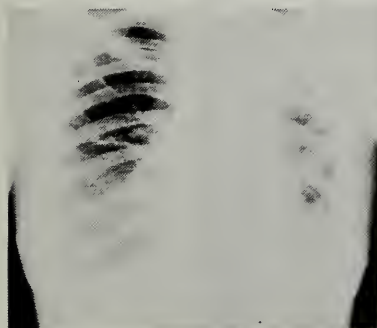


# FAR ADVANCED Tb<sub>c</sub> OBSTRUCTIVE

## A.E. Adult ♀, OVH

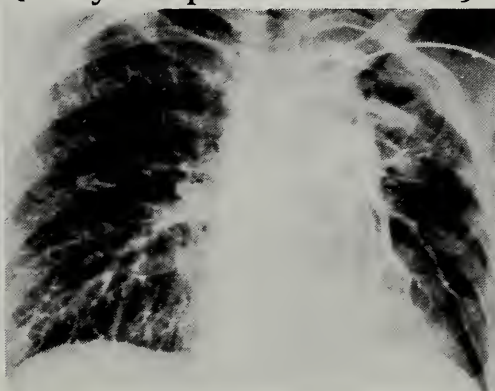
### June 1965

PA Chest Film



Angiogram

(delayed opacification left)



Posterior Scan

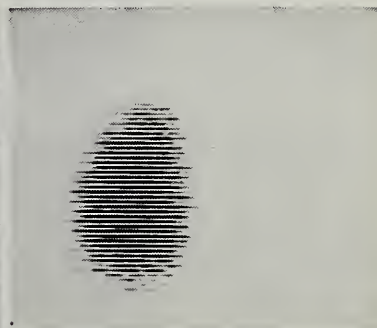


Figure 13. Chest film, angiogram and posterior scan in advanced tuberculosis. Note that the entire left lung is not perfused. The angiogram shows

absent perfusion to the left upper lung field but delayed opacification of the lower lobe arteries.

signal emboli, which frequently precede major episodes. ★★★

821 Malcolm Ave. (90024)

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The authors wish to express their appreciation

to Mary Lee Griswold, Mitsue Yamaguchi and Dee Osargent for counting and sizing the RAMA suspensions, to Judith Hurwit and Charles Balls for technical assistance in the clinical studies at the Los Angeles County Harbor General Hospital, to Hector Pimental for photographic assistance, to Frances Nickles for preparing the illustrations, all of the Laboratory of Nuclear Medicine and Radiation Biology, UCLA; to Jean

## PULMONARY Tb<sub>c</sub>.

U.C.47 ♂, 7-65



### PULMONARY FUNCTION TEST RESULTS

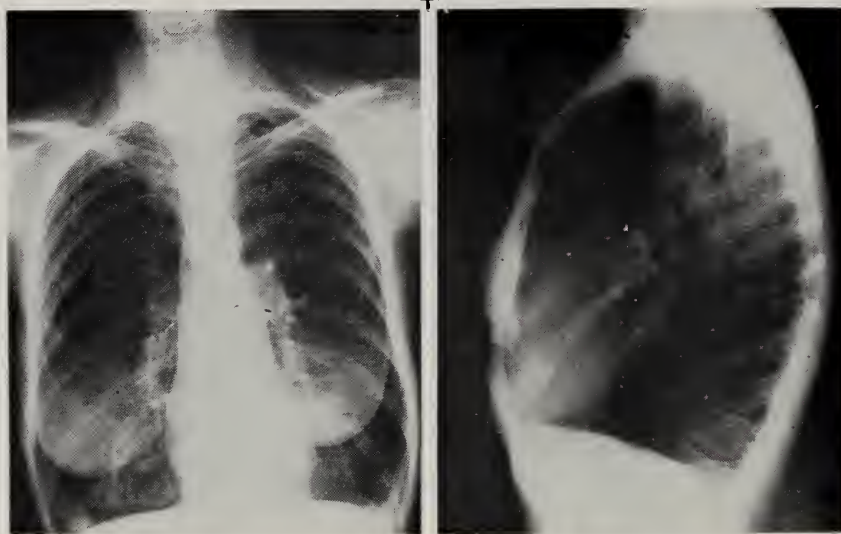
VC	3069 ML	84%
1 SEC	70%	
3 SEC	91%	
MEFR	268 L/M	
MBC	124 L/M	123%
RV	1350 ML	120%
TLC	4474 ML	93%
RV%TLC	30 (23)	

IMPRESSION: NORMAL

Figure 14. Chest film, posterior scan and pulmonary function test results in a 47-year-old male with bilateral disease. The scan demonstrates mal-

function (ischemia) of the right upper lung in the face of normal function tests.

# PULMONARY EMPHYSEMA MOD. SEVERE J. De L. Q 52, LBMH



PA Chest

1-5-65

Lateral Chest



Posterior Scan

Anterior Scan

## PULMONARY FUNCTION TEST RESULTS

VC	2144 ML	79%
1 SEC	29%	
3 SEC	54%	69% p Rx
MEFR	57 L/M	
MBC	12 L/M	14%
RV	2886 ML	231%
TLC	5030 ML	128%
RV%TLC	57 (33)	

IMPRESSION: SEVERE OBSTRUCTIVE  
EMPHYSEMA

Figure 15. Chest roentgenograms and posterior and anterior scans and pulmonary function test results in obstructive pulmonary emphysema. The

scans localize the disease mainly to the right side and demonstrate relatively good overall perfusion in spite of severe obstructive elements.

Price for technical assistance in the clinical studies at the Los Angeles County Olive View Hospital and to June Thompson for similar assistance at the Memorial Hospital of Long Beach; to Drs. Paul Numerof of E. R. Squibb and Sons and Howard Glenn of Abbott Laboratories for grants-in-aid and for donating radioisotopes used in these studies. The authors are grateful to the James Picker Foundation for an institutional grant to the Memorial Hospital of Long Beach for support of part of these studies, and to the California Tuberculosis and Health Association for a grant-in-aid in support of part of this work at Olive View Hospital.

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## ANTI-PROFANITY CAMPAIGN

President Johnson dedicated the world's largest earthen dam in West Virginia last month, but what was missing from the reports of the ceremonies was that the U. S. Corps of Engineers who are in charge of such matters quietly changed the policy on naming new dams. It has long been the practice to name a dam after the nearest community, as for example, Boulder Dam which is near Boulder, Colorado.

The Somerville Dam, unfortunately, is nearest to Gad, West Virginia.

# Some Therapeutic Applications Of Radioisotopes

PAUL V. HARPER, M.D.  
Chicago, Illinois

MY EARLY EXPOSURE to the therapeutic use of radioisotopes dates from my surgical residency under Dr. Lester Dragstedt. We had a patient suspected of having an inoperable carcinoma of the pancreas which we desired for this reason to treat with radium. We explored the patient and found a tumor in the body of the pancreas. Since this was anticipated, the radiologist had prepared and threaded the radium needles and they were available, sterile.

We implanted them in the tumor and led the threads from the ends of the needles out across the abdomen through a Penrose drain. Four or five days later, when we took the sources out, I began to appreciate what a brave project this had been because the thread broke on one of the needles, and it was left inside the patient. She had to be reexplored to remove the needle, which was a long, painful, difficult procedure.

This brought home to me at a very early stage the necessity for finding a better way to accomplish this. The use of implant therapy, as you all know, gives a localized radiation field with a dose far greater than can be achieved with external radiation. This is especially true in the abdomen where there are many vulnerable or-

gans. Dr. Dragstedt directed me to devise some better way of doing this.

We know that many radioisotopes became available with the advent of nuclear reactors. The chart of the radionuclides displays approximately one thousand radioactive sources of potential usefulness. How could they be made useful in some way that will justify the nuisance, danger, and expense of handling them, and what advantages could they have over the use of radium?

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*With the advent of nuclear reactors, many radioisotopes became available. The author discusses the use of these radioisotopes for implant therapy. He considers how they can be made useful in some way that will justify the danger and expense of handling them and what advantages they can have over the use of radium.*

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We have heard that something with less than a thousand year half-life would be desirable, so that even a severe contamination problem would not mean the permanent closing of a facility. It is also necessary that the material be accessible and relatively cheap. This is another way of saying that it should have a sufficiently high activation cross section to permit production in a nuclear reactor, or should be a relatively abundant and easily separated fission product. Only in exceptional circumstances would it be possible to

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From the Department of Surgery, University of Chicago Hospitals and Clinics and the Argonne Cancer Research Hospital, operated by the University of Chicago for the United States Atomic Energy Commission.

Read before the Symposium on Nuclear Medicine, 98th Annual Session, Mississippi State Medical Association, Jackson, May 11, 1966.



make use of cyclotron material for this sort of application. Lastly, in the area of our particular interest, it would be desirable to use a radioisotope more easily shielded than radium, and possibly in a form with a little more flexibility. With radium, use is pretty well limited to what can be done with the particular sources on hand.

One such material is tantalum wire, which can be made radioactive by neutron activation. The beta radiation from the tantalum can be shielded by coating the wire with platinum. Figure 1 shows one of the applications of tantalum wire for implant therapy. Tantalum wire is measured off, dummy ends are crimped on, and it is implanted with the ends fixed in place. This gives a considerably greater degree of flexibility than is usually achievable with radium. Figure 2 shows another implant or device for tantalum sources which is for intrauterine therapy. Figure 3 shows still another device that was devised for bladder therapy. A little hairpin-like applicator was placed through the base of a bladder tumor and subsequently withdrawn through the urethra.

## SHIELDING PROBLEMS

Now this is all very well, and the wires give a little degree of additional flexibility, but it has the continued disadvantage that the gamma radiation from the tantalum is approximately one MeV, so that the shielding problems are the same as those with radium, which for practical purposes, is unshieldable except for storage and transportation.

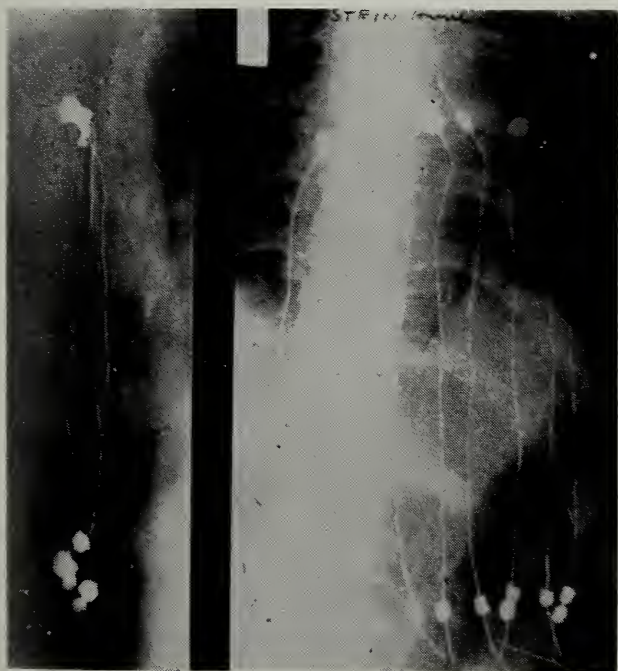
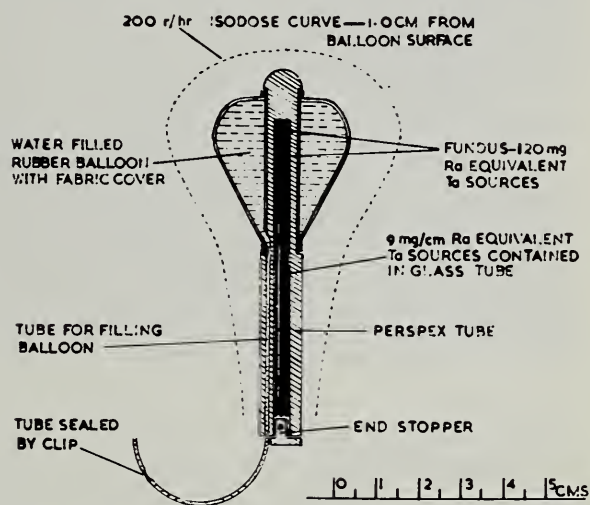


Figure 1

When handling it, the only way to protect yourself is by working rapidly and staying away from the source, using the inverse square attenuation.

Other investigators, particularly Dr. Henschke in New York, have made use of other radioiso-



## BALLOON APPLICATOR FOR CORPUS CANCER

Figure 2

topes for implant therapy.<sup>1</sup> He has devised applicators containing iridium-192 which is marketed by Squibb. These sources are embedded in small plastic tubes or threads which can be threaded through the tumor (Figure 4). The ends of the threads and then the active lengths can be withdrawn from a shield and into the tumor. The exposure to the operator can be greatly reduced since the gamma energy, which is around 250 to 300 keV, is much more easily shielded. Moreover, instead of needing a cart for transportation, the sources can be carried by hand in a little lead pig without too much difficulty. These can be sterilized and kept available for unexpected use in the operating room, thus eliminating the necessity of making allowances for preparation.

## POLYETHYLENE IMPLANT

When I was working for Dr. Dragstedt, we devised an even more flexible procedure.<sup>2</sup> This was to make an implant using polyethylene tubing. I do not think the principle of afterloading had been evolved to any great extent at that point, but our thought was to place this tubing in the implant, more or less according to the radium distribution rules, and subsequently fill it with an isotope.



Figure 5 shows how this was planned. The two ends of the tubing would emerge through the abdominal wall. Then the isotope in solution could be drawn into the implant. Figure 6 shows an experimental implant. Here the tubing is filled with mercury so that radiography of the implant may be made for calculation of its volume.

## TISSUE DESTRUCTION

The microscopic section (Figure 7), shows an experimental implant in the pancreas of a dog with destruction of tissue in the implant, preservation of the nearby bowel which was not damaged appreciably, and minor changes in the nearby pancreas. We were able to destroy this portion of pancreas with a dose of approximately 30,000 R delivered over a period of three months. Figure 8 shows such an implant in a tumor of the pancreas of a patient. This implant was actually placed in another hospital and the patient was sent to us for instillation of the radioactive solution.

Figure 9 shows two of the isotopes that we chose for use in such implants. We tried iodine-131 because it was cheap and easily available, and had a gamma radiation which was reasonably penetrating. This shows how it compares to

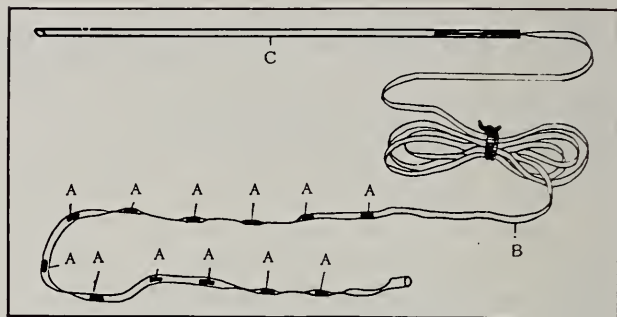


Figure 4

radium as far as the air-water dose ratio, which represents absorption in tissue, is concerned. The steeper curve shows the curve for cesium-131 which is an isotope that emits very soft radiation although it apparently penetrates through tissues well enough to produce relatively uniform radiation fields. This can be shielded very com-

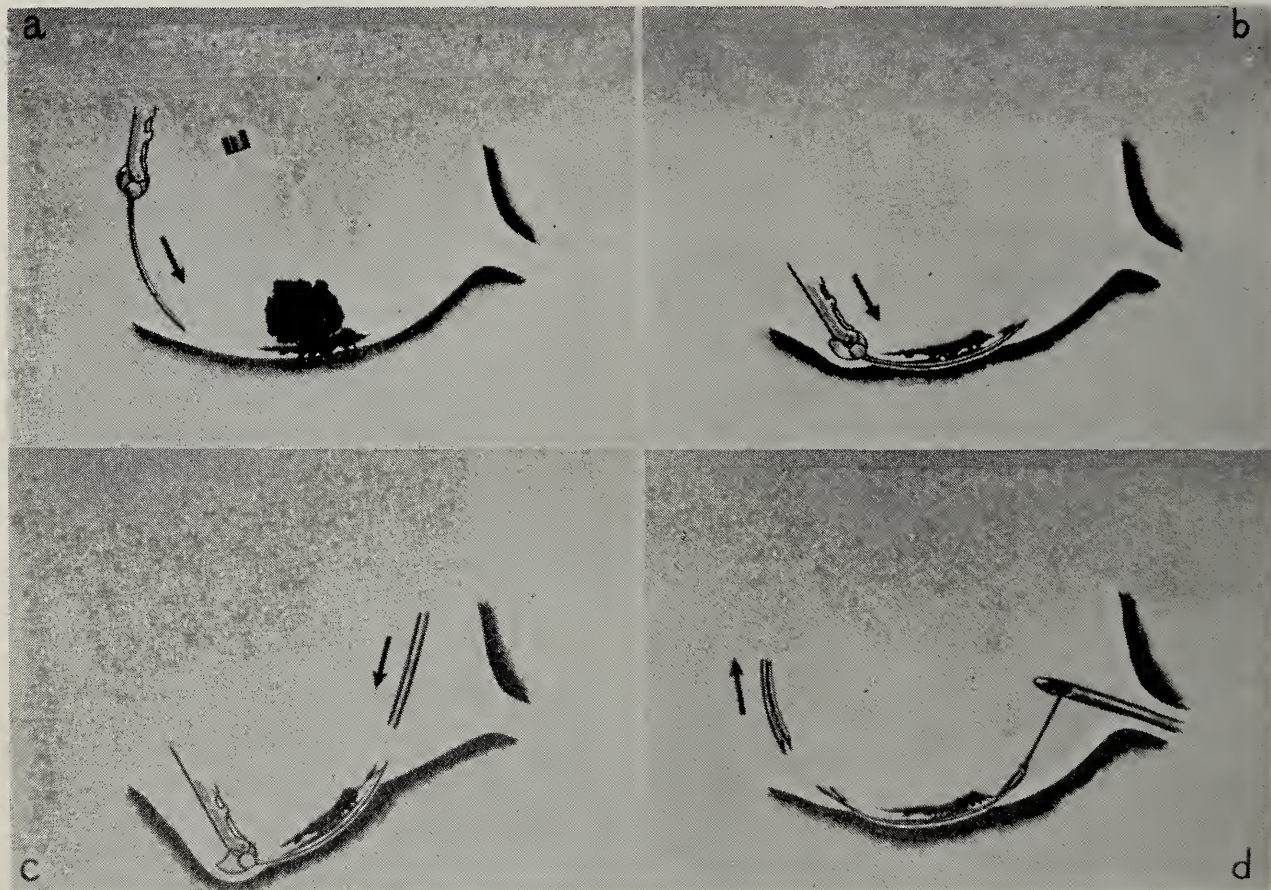


Figure 3



pletely during manipulation with only thin lead foil.

It was our hope that such implants would prove to be a useful type of procedure. However, the use of radium and implant therapy has been giving way to more advanced machine treatment and it has not, up to the present, proved economically

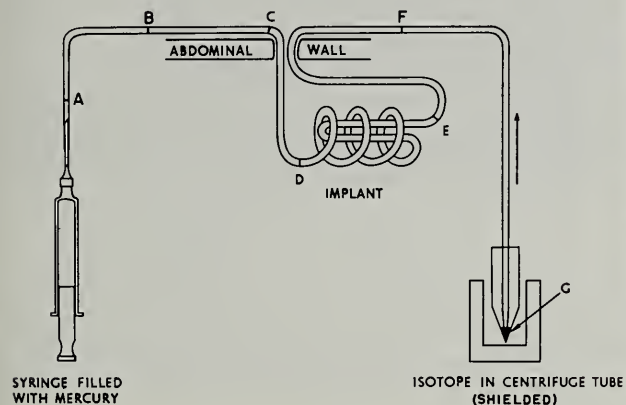


Figure 5

feasible for us to pursue this type of treatment vigorously. Certainly, so far as the operator is concerned, it is possible to use such implants much more safely than the ordinary unshieldable gamma emitters.

Figure 10 shows the effect of beta radiation from the radioactive iodine in polyethylene tub-

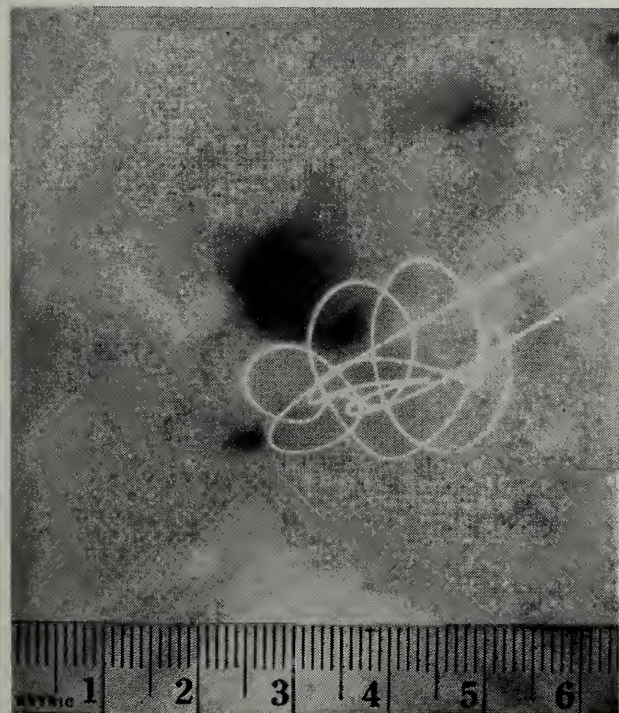


Figure 6

ing as it passes through the liver. Around the tract we have complete destruction of the tissue by the very intense beta radiation field surrounding

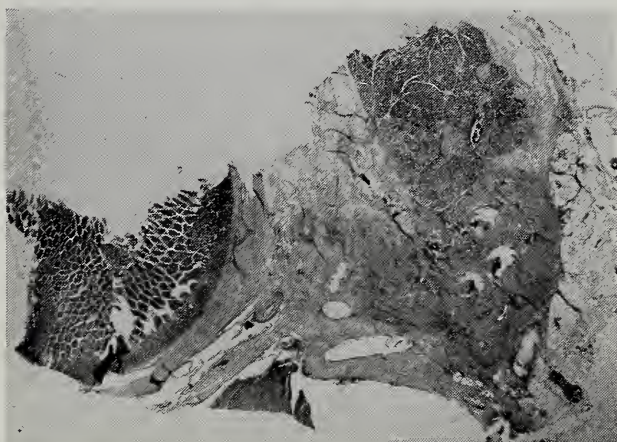


Figure 7

the source. Figure 11 shows an extension of this idea to a plain applicator, implanted where it is needed and subsequently loaded with radioactive material. Figure 12 shows one of these applicators in place on the floor of the anterior cranial fossa with three radon seeds underneath, so that the tumor of the ethmoid sinus is well surrounded.

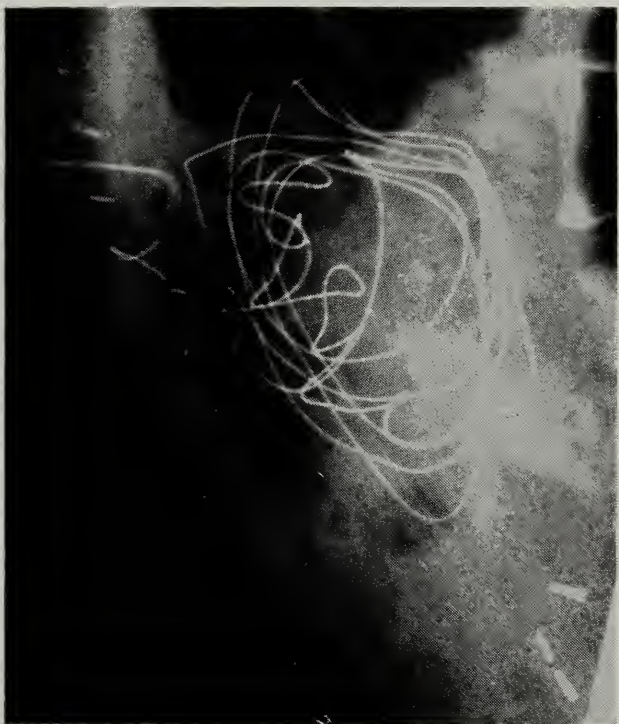


Figure 8

Patients in whom we were able to use this sort of treatment were those referred to us because conventional forms of therapy had been exhausted, and all tolerable external radiation had been given.



Again it is hard for this method to compete with the machines. In exploring low energy emitters a little further, we investigated one which emits low energy x-rays, palladium-103.<sup>3</sup> Figure 13 shows how the 20 keV x-rays are almost completely shielded by one-hundredth of an inch of lead foil so that this material can be handled very easily

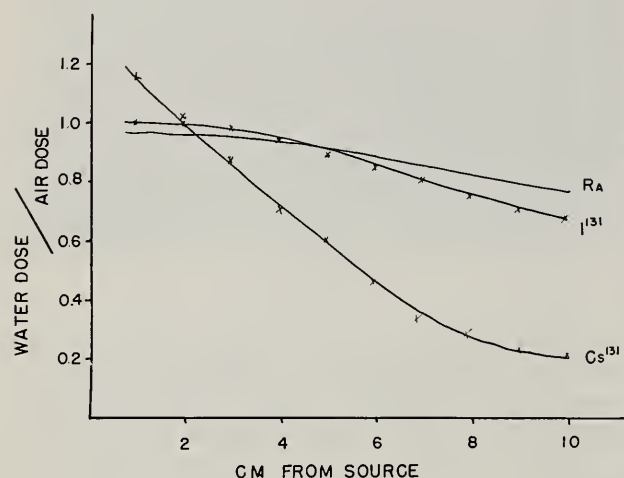


Figure 9

during manipulation. Figure 14 shows its penetration through tissue equivalent material, smoothing out and giving a relatively uniform radiation field as compared to the gold-198 beta rays.

On one occasion this material was incorporated into silicone rubber and coated onto plastic spheroids. These were packed into a large, draining cavity in the pelvis following a pelvic exenteration, without obstructing the drainage which could pass out through the interstices of the

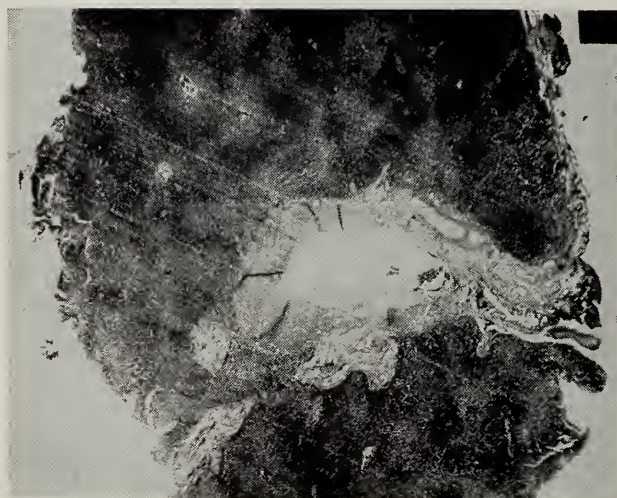


Figure 10

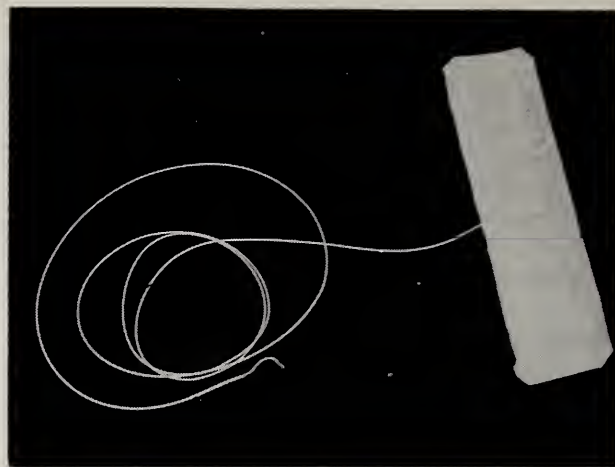


Figure 11

spheroids (Figure 15). We were able to leave this applicator in for six weeks with no radioactive contamination. The palladium-103 has a half-life of 17 days, so it is not necessary to use large millicurie quantities.

Figure 16 shows a device with which some of you are doubtless familiar, the gold grain gun, use-

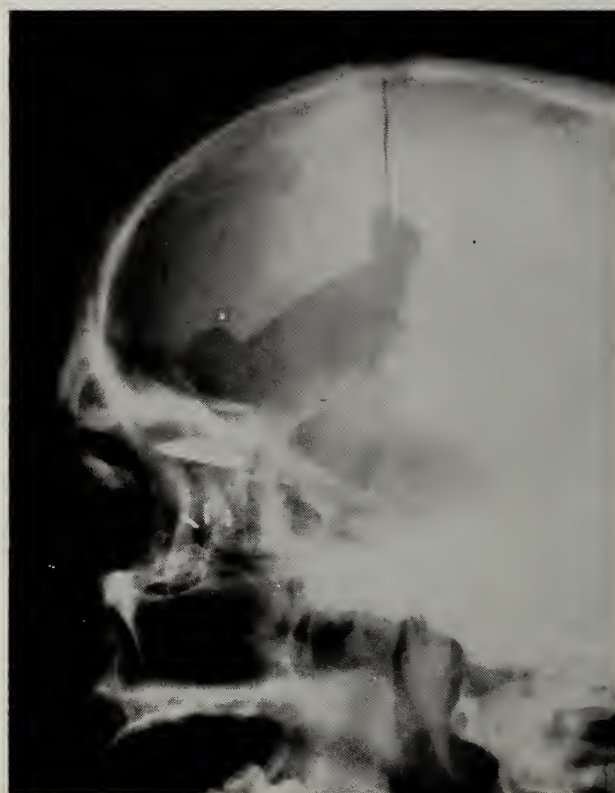


Figure 12

ful for placing small sources in an implant.<sup>1</sup> Every time the trigger is pulled, a source drops out of the end of the needle. The original sources were gold surrounded by platinum to shield the beta



radiation. An implant has been made with this device using chromium-51 seeds machined to fit the gun. Good clinical results were obtained. Chromium has a high enough cross section to permit easy and cheap production of the radioactivity sources. The half-life is 27 days, and the radiation is about 300 keV, which is not too difficult to shield.

We ran into an interesting administrative problem with this as far as the licensing is concerned.

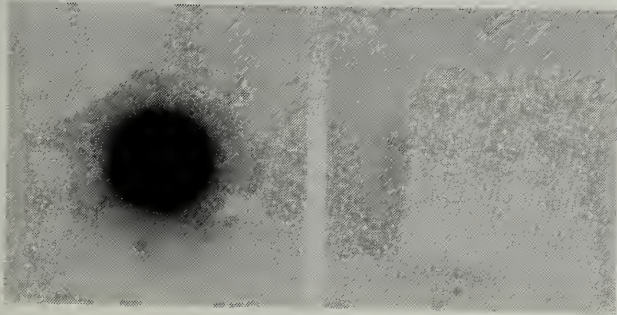


Figure 13

As you know, when chromium decays, only about 8 per cent of the disintegrations are associated with the emission of a gamma ray so that 100 millicuries of chromium result in about eight effective millicuries. Some time was required to reach an agreement with the licensing division who thought that the patient must remain in the hos-

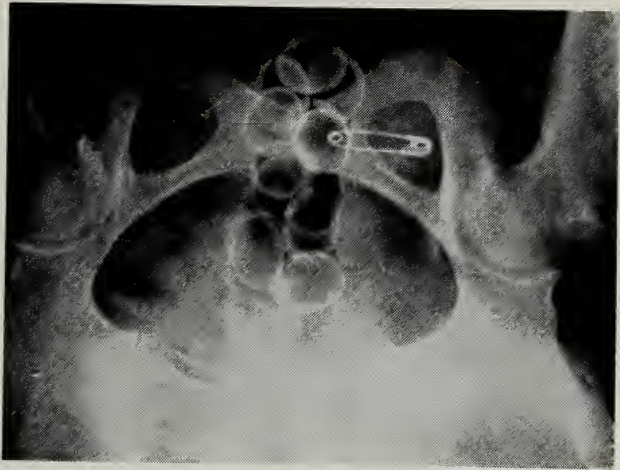


Figure 15

pital because he contained so many millicuries that it would be dangerous to have him walking around outside.

There have been some serious problems of this nature. I think that it was in New York that a patient who went home with an iridium implant was subsequently cremated, thus creating a problem about contamination in the smoke from the crematorium. This of course, is something to be avoided.

The operating principle which finally evolved after about a year and a half of discussion over the chromium was that would it be proper to send the patient home, if it would be legal under interstate regulations to ship him in interstate com-



Figure 14



## RADIOISOTOPES / Harper

merce. This seems like a rational approach to the problem.

One of the dividends of this search for radium substitutes is that the substitute may turn out to have applications above and beyond those offered by the radium in the first place. We stumbled across one of these applications in connection with our interest in destruction of the hypophysis for control of metastatic breast carcinoma. Figure 17 shows a source constructed for this purpose, consisting of a 19 gauge needle containing 50 millicuries of strontium-90 in the tip.<sup>4</sup>

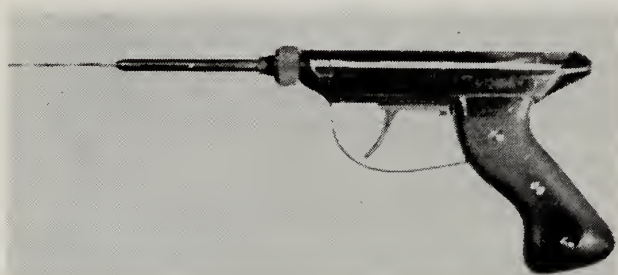


Figure 16

This picture is taken under water to show the blue glow, seen in pictures of reactors, of the Cerenkov radiation from the electrons moving through water faster than light, and it gives a pretty good estimate of the effective radiation field of the beta radiation. The entire energy from beta radiation is dissipated over a very few millimeters producing an extremely intense radiation field which is essentially cauterizing.

### HYPOPHYSEAL DESTRUCTION

Figure 18 shows how this source is used in the destruction of the hypophysis. Originally this approach was used by Forrest<sup>5</sup> with radon seeds, but the gamma radiation field from the radon seeds caused destruction and damage to the optic nerves and optic tract. Use of a beta emitter with a much shorter range and more localized radia-



Figure 17

tion field is therefore preferable. We first used yttrium-90, but the long-lived strontium-90 in which, of course, the yttrium daughter is the effec-

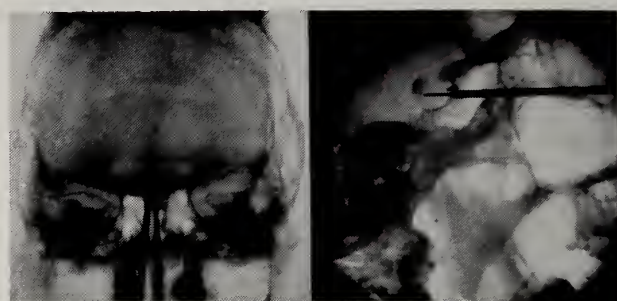


Figure 18

tive agent, has proved to be more satisfactory. As far as the operator is concerned, the scattered radiation from the image intensifier of the fluoroscope is much more of a hazard than the radiation source, which can be kept shielded.

### NEUROSURGICAL BYPRODUCT

Figure 19 shows the destruction of the hypophysis achieved without damaging the patient appreciably. A byproduct of this project is the use of the source by the neurosurgeons for cordotomy

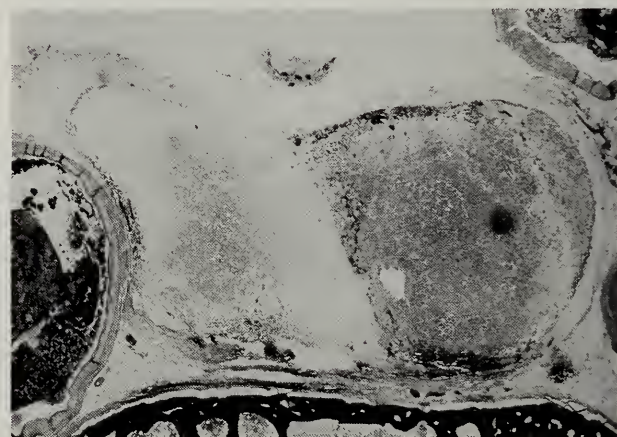


Figure 19

without a big open operation.<sup>7</sup> In the year before this source was available, perhaps four or five cordotomies were done at our hospital. In the subsequent year, over a hundred cordotomies were performed on patients who were extremely ill, and would not be considered for the major procedure of a surgical cordotomy. This procedure can be done with little more danger and ceremony than an ordinary lumbar puncture.

I hope this has given you a little look at some of the directions in which people have been mov-



ing, some of the dividends that we hope to be able to gain in the future, and some idea of the degrees of freedom and safety that we can make use of in avoiding some of the problems that are intrinsic in the use of radium. ★★★

950 E. 59th St. (60637)

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TYPECASTING	
acciden✕ prone	adjust e d
alcoholic	amnesa
schizoid	nymphomania
Don Jua <sup>n</sup>	Obsession
guilt	memory
insomnia	reflex
manic	rialety

Carl Kern

—Smith, Kline & French Psychiatric Reporter

# Treatment of Radiation Injury

G. A. ANDREWS, M.D.  
Oak Ridge, Tennessee

WITH THE GREATLY INCREASED opportunities for use of atomic energy that developed as a result of World War II, there was an obvious need for more information about mechanisms and treatment of radiation injury. In addition to the possibilities of mass casualties from nuclear weapons, there are increasing exposures to radiation in peacetime activities. The spread of nuclear power carries with it the possibility of reactor accidents.

Even though the industries related to atomic energy have been among the safest in the world, and have a magnificent record of preventing radiation accidents, there are still a few inadvertent exposures of human beings, and with the greatly increasing numbers of nuclear installations it is reasonable to suppose that such accidents will continue to occur occasionally in spite of the best efforts to prevent them. Furthermore, the exploration of outer space involves a whole new problem of dealing with the radiations that will be encountered there.

Interest in radiation effects in the human being did not begin, of course, with the development of World War II; knowledge on this problem had been expanding ever since the discovery of radiation late in the last century. The earlier studies involved mainly radiation to only local parts of the body rather than to the whole body. In addition, much of it was concerned with chronic radiation delivered over a long time. Recent research has expanded to cover all types of dose rates from very low to very high and all types of

partial-body irradiation. In the present discussion we shall be mainly concerned, however, with exposure of the whole body occurring in a very short time, as might happen in a nuclear accident. The information outlined here represents the work of many investigators, and no effort will be made to list by name those who have contributed to it.

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*Interest in radiation effects in the human being began with the discovery of radiation late in the last century. The author notes that radiation injury is one of the less serious hazards in our environment, but it is a significant problem about which much is now known.*

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It is sometimes thought that radiation injury is rather mysterious and that little is known about it; on the contrary, few environmental hazards have been so well studied. The United States Atomic Energy Commission has supported a vast research effort in this area during the last 20 years and one of the most gratifying results has been that information of much broader importance than the treatment of radiation injury has arisen from this research program.

The greatest amount of information on radiation effects is, of course, available from studies in experimental animals. Many of the phenomena seen after radiation occur in all mammalian species, and significant predictions about man can be made from these studies. Nevertheless, differences between man and other mammals make it necessary to look for direct information in the human being.

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From the Medical Division, Oak Ridge Institute of Nuclear Studies, an operating unit of Oak Ridge Associated Universities, Inc., under contract with the United States Atomic Energy Commission.  
Read before the Symposium on Nuclear Medicine, 98th Annual Session, Mississippi State Medical Association, Jackson, May 11, 1966.



This information comes from the Japanese exposed at Hiroshima and Nagasaki and Marshall Islands exposed to fallout in the Pacific. These groups include rather large numbers of patients, but the information on the Japanese was, of necessity, very limited and poorly documented. The investigations on the inhabitants of the Pacific Islands have been very complete and well documented; they involve a type of exposure that is somewhat inhomogeneous and somewhat protracted.

Radiation accidents have involved only a small number of persons. The clinical results have generally been exceedingly well studied but the dosage delivered can not always be determined accurately. Studies in which total-body irradiation is applied for therapeutic purposes have been done on quite large numbers of patients, and the results have been carefully measured, but the main disadvantage is the preexisting disease that alters the response. At our laboratories in Oak Ridge a careful retrospective study is being done on a large number of patients treated clinically. This work is supported by the National Aeronautics and Space Administration and the U. S. Atomic Energy Commission.

## ANIMAL EXPERIMENTATION

It is apparent that while we must rely very heavily on work in experimental animals, where conditions can be very well controlled, we need also to evaluate as thoroughly as possible the various types of information relating to human beings. Each one of these human groups has certain advantages and disadvantages for evaluation of radiation effects and prediction of the response of normal persons.

There is very little experience in the human being with doses in the extremely high range; that is, above 3,000 or 4,000 rads. On the basis of animal studies the consensus is that the most obvious manifestations would be those of damage to the central nervous system and that survival would not be more than two or three days. In two clinical experiences that have involved such high doses, in addition to neurological manifestations, there have been profound cardiovascular effects with a state of shock a major factor. At slightly lower doses the effects are mainly gastrointestinal, and patients are likely to die within 10 days, of electrolyte imbalance and infections.

At still lower doses of 1,000 rads or less, the chief manifestations are related to the hematologic system. A profound depression of the bone marrow results in hemorrhage and infection, and these

are the most likely causes of death. When death occurs as a result of hematologic depression, it is usually from the third through the fifth week after exposure; this is considerably later than the time of death from the higher doses which produce the central nervous system or gastrointestinal syndrome. The hematologic type of damage has been the most common in human experience and it seems probable that radiation accidents, experience in outer space, and even most of the potential military exposures would be likely to involve these dose levels rather than the much higher ones that produce chiefly gastrointestinal or central nervous system manifestations. Therefore, the fact that the hematologic type of damage can be effectively countered by therapy is of considerable importance.

## CHANGES IN BLOOD

After a dose in the midlethal range, the blood picture exhibits a rather characteristic pattern of events. There is likely to be a brief leukocytosis, lasting only a few hours and representing a mobilization of granulocytes already formed. The granulocyte level will then gradually fall for a week or so and then may show an abortive rise so that at about 15 days it is higher than it was at 10 days, perhaps up into the low normal range. After this abortive rise at 15 days, the granulocyte count falls progressively until around the 30th day when it reaches its lowest point. If the patient survives, by the 35th or 40th day regeneration of the granulocytes is likely to be under way and they return to normal levels.

The platelets show a pattern quite similar to that of the granulocytes, perhaps lacking the initial brief rise above normal and without such a clear-cut abortive regeneration. The nadir, however, occurs at almost the same time as that of the granulocytes, perhaps a very few days earlier, and recovery follows a similar pattern. The lymphocyte levels show a quite different evolution. They fall very promptly and within 48 hours reach a point almost as low as they will ever reach. The degree of this lymphocyte fall is a valuable early index of the degree of radiation injury. Red-cell values change much less, relatively, because of the long life span of the normal red cell, but a mild anemia may be produced several weeks after exposure.

## DEATH OR SURVIVAL

This hematologic picture is closely correlated with the problem of death or survival. If the patient can live through the period of greatest leu-

kopenia and thrombocytopenia, then spontaneous recovery will occur. If the patient dies at four weeks, this does not mean that there has been permanent marrow ablation; in fact, we know very little about permanent marrow ablation as a radiation effect. Such a death should probably be interpreted as a temporary marrow damage so severe that it could not be survived.

Effective therapy consists of several measures. In addition to general factors such as rest and adequate nutrition, one should try to protect the patient from exogenous infection. This can be done with some of the newer plastic isolators or other techniques for keeping bacteria away from the patient. Antibiotics can be highly effective in treating infections that occur. Some of these infections are from normal bacterial inhabitants and involve organisms that would not usually be pathogenic.

### CAUTION ON ANTIBIOTICS

This raises the question of whether one should try in advance to sterilize the gastrointestinal tract with antibiotics. At the present moment the best opinion is that this should not be done unless a sterile environment can be provided. The prophylactic use of antibiotics is very questionable in these patients, and much more information is needed about it, but there is no question about the advantage of treating a known infection once it exists. Since these infections in the leukopenic patients may be fulminating, it is necessary to start treatment as soon as a severe fever develops, but only after appropriate cultures have been taken from all likely sites of infection. The antibiotic can later be adjusted after the bacteriologic reports are available.

We know that gram-negative organisms are a common cause of trouble. We also know that fungus infection may be important and that *Candida* is a very common problem. Because of this, it may be worthwhile to give nystatin prophylactically to patients with very severe neutropenia. The choice of antibiotics depends upon the most likely infection or preferably upon the proved bacteriologic identity of the specific invader. Chloramphenicol has sometimes been considered unacceptable because in a few patients it is known itself to produce profound marrow depression. My impression is that one should not rule out chloramphenicol if the nature of the infection is such that it should be used, and we have seen beneficial effects with this antibiotic in irradiated patients. Still, it is of course a dangerous

drug and should not be used for trivial reasons or where the indication is not clear-cut.

Someday we may be able to administer large numbers of normal white cells to such patients, and in fact the cells from patients with granulocytic leukemia have been shown to be of value in combating infections in certain patients with profound leukopenia. The possibility of inducing a graft of hematologic tissue with such blood cells presents serious problems and at the present time the use of this form of therapy is limited, partially because of the difficulty in obtaining the cells. Nevertheless, we should remember that administration of such cells is a very potent weapon in any severely leukopenic patient who appears to be dying from uncontrolled infection.

### HEMORRHAGE

The other major manifestation is hemorrhage, and this can be treated by giving platelets from healthy donors. Usually it is not recommended that treatment be started until the need is quite clear. Some patients tolerate a rather low platelet count quite well, and unless the low platelet count is complicated by some clinical manifestations of a hemorrhagic tendency it is doubtful that it in itself should be used as an indication for therapy. Once the need for platelets is clear we may need to give very large amounts, using multiple donors; for example, a patient might require platelets from two to six units of blood daily.

If it appears, shortly after exposure, that the patient has been exposed to a lethal amount of irradiation and it is believed that the supportive treatment with antibiotics and platelets is not likely to carry him through the period of marrow depression, then a marrow graft might be considered, although this is a highly experimental form of therapy and has not had much success in the human being as yet.

### SPLENIC SHIELDING

Perhaps we should review briefly the development of marrow-graft studies in relation to radiation. It has long been known from animal experiments that if a small part of the bone marrow could be completely protected during the exposure, the rest of the body could accept a very high dose without a lethal result. Quite a number of years ago attention was focused upon the fact that in the mouse the body could be protected by shielding the spleen. If an abdominal incision is made and the spleen is exteriorized and protected behind a lead shield, a mouse can survive a dose of radiation that would otherwise be lethal. The



spleen in the adult mouse, of course, contains many more hematopoietic elements than does the spleen of the adult human being.

For some time there was a vigorous difference of opinion among investigators about the nature of protection by splenic shielding. Some were convinced that the protected spleen yielded an obscure biochemical material of hormonal nature that stimulated the bone marrow to recover, while others were equally convinced that the spleen supplied living precursor blood-forming cells that moved from the spleen into the bone marrow and caused recovery. It was soon found that bone-marrow cells from a healthy donor would also greatly facilitate recovery and the same question existed about the nature of the effective agent, whether it was the living cell or some chemical factor. After a time a whole group of ingenious experiments demonstrated that the living cell was the important thing and that a true repopulation of the marrow was produced by these techniques.

GENETICS OF DONOR

It soon became apparent that the genetic relationship of the donor animal to the host was extremely important. When cells from animals of a different strain or different species were given, there was likely to be good protection against the immediate radiation death but the protected animals soon began to die of a peculiar disease of immunologic nature. This was characterized by wasting, failure of hair growth, lack of lymphocytes, and some abnormal skin manifestations. This was referred to as secondary or homologous disease or foreign-bone-marrow disease. "Runt disease" is a variant of it produced when the immunologic incompatibility is established very early in life. There was again an area of controversy and uncertainty about whether the major immunologic reaction was host versus graft or graft versus host. There is now good evidence that a major share of the problem is a reaction of the graft against the host although some element of host-against-graft may be present.

To avoid this problem in marrow-graft experiments in mice, all one needs to do is to select donor mice of exactly the same inbred strain as the host. Inbred strains of mice are so uniform that they are all like identical twins to each other. However, in the human being there have been only a few instances in which there was need for a graft and an identical twin was available to serve as a donor. One might think that close familial relationship between brother and sister or mother and child would avoid these problems, but in fact

only identical twins are really genetically compatible. Table I shows the various genetic relationships and gives examples in animals and human beings. Only with autografts or isologous grafts

TABLE I  
DONOR-HOST RELATIONSHIPS

	<i>Examples</i>	
	EXPERIMENTAL	HUMAN
Autologous	Same animal	Same person
Isologous (Isogeneic) Same genetic type	Inbred strain of mice	Identical twins
Homologous (Allogeneic) Same species	Different strains of mice	Siblings, parents, or unrelated persons
Heterologous (Xenogeneic) Different species	Rat to mouse	Ape to man

is there complete freedom from immunologic complications. With homologous tissues the incidence and severity of incompatibility vary greatly from case to case. With heterologous grafts the difficulties tend to be very severe.

Apparently these problems of genetic compatibility and immunologic reactions are of great importance in relation to marrow grafts and, in fact, all types of tissue transplantation in the human being. Methods are being sought to select unrelated donors that happen to have the right genetic traits. There are also efforts to treat the immune disease by drugs, and this can be done with some success by means of cytotoxic agents that suppress antibody formation. However, it should be pointed out that in the human being most efforts to achieve marrow transplantation have resulted in absence of take rather than a successful take with frank secondary disease. The diagnosis of secondary disease in the human being is somewhat difficult. There seems no doubt that it has been produced in some studies on patients with acute leukemia and it may be that in the future secondary disease will be the biggest problem after the present road-block, that is, failure of take, has been overcome in the human being.

MARROW GRAFTS

As things now stand, we believe that in a desperate situation it would be justifiable to attempt to use a bone-marrow graft in human beings ex-

## RADIATION INJURY / Andrews

posed to a lethal dose of radiation. Probably the graft would be given within the first week or 10 days but not necessarily within the first 48 hours. The optimum result to be hoped for would be a temporary survival of the graft with eventual rejection by the recovering host.

The studies stimulated by the urgent need to understand radiation injury have had wide application beyond that originally anticipated. Most notable has been the advance in transplantation immunology. Although work on grafting of donor skin has been going on for many years, the efforts to transplant other organs have been mostly in recent years. These attempts have made extensive use of the information derived from radiobiological experiments. A related area of great progress is genetics; here again the studies stimulated by the radiation problem have been of great importance and have extended to include fundamental work in molecular biology.

On a more clinical level, the progress in radiobiology gives promise of being of assistance in

handling certain problems of marrow depression from drugs and unknown causes that simulate radiation injury. Another indirect result of interest to clinicians is the application of radiobiologic data to problems of radiation therapy to local areas of the body for the treatment of cancer. The availability of teletherapy sources containing radioisotopic sources has greatly improved the depth-dose distribution. Factors that enhance the sensitivity of malignant tissue or protect the normal tissue have received great emphasis recently, and much of this advance is related to the general work in radiobiology.

Radiation injury is one of the less serious hazards in our environment, but it is a significant problem about which much is known. Effective treatment is available for radiation damage, but extremely high doses produce injury that cannot be controlled by methods now available. Investigations of man's response to radiation have been exceedingly fruitful and have had applications far beyond the original scope of the work. ★★★

Institute of Nuclear Studies (37831)

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## PERTURBING PERISTALSIS

"Dear Mom and Dad," wrote little Johnny from camp. "I'm having a wonderful time, but I have been a little sick for a couple of days. The camp doctor said that I had a dire rear."



# Clinicopathological Conference LXXXI

Conducted by the Department of Pathology  
St. Dominic-Jackson Memorial Hospital  
Jackson, Mississippi

THIS 77-YEAR-OLD white woman was admitted to St. Dominic Hospital on Oct. 14, 1965, with a "long and indefinite history of chronic cough productive of mucoid and mucopurulent sputum." She stopped smoking cigarettes in 1959. Frequent head and chest colds occurred during the winter months. Her principal complaints at the time of admission, however, were weight loss, anorexia, and cough. She had taken digitalis for several years prior to admission as treatment for "congestive heart failure."

## PREVIOUS ADMISSIONS

She had first been admitted in 1955 with (1) chest pain, (2) shortness of breath, (3) swelling of feet and ankles and (4) full feeling in stomach. The blood pressure reading was 165/90. The lungs were described as emphysematous, and routine blood and urine determinations gave normal results. No heart murmurs were heard. She was discharged improved after three days with the diagnoses of (1) hypertensive cardiovascular disease, (2) left bundle branch block, (3) cardiac enlargement, (4) congestive heart failure, and (5) obesity.

Her second admission was in January 1961. The admitting diagnoses were bronchitis with asthma and hypertensive cardiovascular disease. The blood pressure was 155/85. The heart rhythm was regular, and the rate was 90 per minute  $A_2 > P_2$ . No mention was made of any murmurs. The abdomen was "markedly obese." Chest x-ray revealed cardiac enlargement and "hypervascularization" of the lungs. She was discharged improved after three days symptomatic therapy including aminophylline, ammonium chloride and sedation. She also received nasal oxygen, digitalis, penicillin and Mysterlin.

She was readmitted for the third time in June 1961 because of epigastric pain. She also complained of cough and uterine prolapse. Cardiac findings were the same as present six months previously. No murmurs were heard. The blood pressure was 145/85. Routine blood and urine studies were within normal limits. The BUN was 22 mg. per cent. X-ray of the colon revealed no abnormalities. Chest x-ray was similar to the one

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*In CPC LXXXI, Dr. J. P. Melvin discusses the case of a 77-year-old white woman admitted with a long and indefinite history of chronic cough productive of mucoid and mucopurulent sputum. Her principal complaints at the time of admission were weight loss, anorexia and cough. Dr. Robert R. Gatling gives the autopsy report. Other discussers are Dr. Nadia Tyson, Dr. George F. Smith, and Sister Helen Marie.*

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made six months previously. X-rays of the gallbladder revealed no dye concentration and no radiopaque stones. X-ray of the stomach revealed "sliding type hiatal hernia." An EKG showed a left bundle branch block. Only symptomatic therapy was carried out, and she was discharged improved after three days.

In 1964 she was admitted with the chief complaint of vaginal bleeding of two of three months' duration. She also stated that an episode of severe dyspnea and edema had occurred three weeks previously. The blood pressure was 134/80 and the pulse 90 per minute. Scattered high-pitched rales were present in both lungs. The cardiac

rhythm was regular. No murmurs were heard. Complete uterine prolapse with erosion of the posterior lip of the cervix was observed and was regarded as the probable site of bleeding. Hemorrhoids were also regarded as a possible source of bleeding. Routine laboratory work (blood and urine) gave normal results. Chest x-ray revealed cardiac enlargement, predominately left ventricular. She was discharged improved after six days with the diagnosis of third degree uterine prolapse, cervical erosion, and congestive heart failure.

### PHYSICAL EXAMINATION

Physical examination on the Oct. 1965 admission revealed the temperature to be 98.2°, pulse 76 per minute, respirations 20 per minute and blood pressure 130/80. She was described as neither dyspneic nor cyanotic, and the neck veins were not distended. She was coughing up mucopurulent sputum at the time of examination. The nasopharyngeal mucosa was congested. The lungs were hyper-resonant and were free of rales. The heart was described as not definitely enlarged to percussion. The rhythm was regular. A grade III systolic murmur was audible over the precordium and was loudest at the apex. No thrills were present. The abdomen was soft, and no masses or enlarged viscera were palpated. "Arthritic changes" were noted on examination of the wrists and hands. The clinical diagnoses were chronic bronchitis, pulmonary emphysema, arteriosclerotic heart disease with possible mild congestive failure and osteoarthritis.

Laboratory data showed urine pH 5, albumin negative, sugar negative, and microscopic negative. The hemoglobin was 13.2 gm. per cent, hematocrit 40 per cent, WBC 11,400 and the differential revealed neutrophils 82 per cent, eosinophils 1 per cent, lymphocytes 16 per cent, and monocytes 1 per cent. Blood chemistries showed chlorides 100 mEq. per liter, CO<sub>2</sub> combining power 27 mEq. per liter, potassium 3.4 mEq. per liter and sodium 131 mEq. per liter. BUN was 25 mg. per cent. Postprandial blood sugar was 123 mg. per cent. The VDRL was nonreactive.

### OTHER FINDINGS

A sputum culture showed a mixture of *Klebsiella-aerobacter* and alpha hemolytic streptococci. X-rays following a barium enema revealed extensive diverticulosis of the sigmoid. Gallbladder studies were done: no function was observed and

no radiopaque calculi were seen. Repeat gallbladder studies one week later yielded similar results. A chest x-ray showed considerable cardiac enlargement; hypervascularization changes were seen in both lower lung fields. No abnormalities were found on upper GI studies. An electrocardiogram revealed first degree AV block and complete left bundle branch block.

The course in the hospital was afebrile and was characterized by continued expectoration of mucopurulent sputum, occasional bouts of pallor, periodic cyanosis, nausea, and upper abdominal pain. The abdominal pain was of such degree as to require demerol for relief. Her treatment was principally symptomatic and consisted of analgesia, sedation, intravenous fluids, Chloromycetin and other measures. Although she never improved significantly, her condition never seemed to worsen, and she died suddenly on the 11th hospital day. The circumstance of her death was described as consisting of one respiratory gasp followed by cessation of all vital functions.

### DISCUSSION

*Dr. J. P. Melvin:* "We have a history of an elderly woman with predominately pulmonary symptoms. She was obese and had clinical pulmonary emphysema, chronic bronchitis, probably with bronchiectasis, which was productive of mucopurulent sputum for years but remained essentially unchanged. She suddenly died on the 11th hospital day without obvious cause and probably to the surprise of her physician. What we really want to know about this woman is what disease could adequately explain her 10-year history of symptoms and what caused her death.

"I could mention a lot of things, for example, amyloid disease. Amyloidosis can involve the heart. Amyloid is part of a chronic suppurative process; she had chronic bronchiectasis. That type of amyloid, however, when it does involve the heart, doesn't do so, as a rule, to the extent of producing true cardiomegaly with congestive heart failure. It can, however, on rare occasions. The type of amyloid deposition that produces heart disease and heart death is usually the type found in old men in the absence of chronic suppurative disease and is called primary systemic amyloidosis. There are other causes for secondary amyloidosis, however.

"We can assume, therefore, that she did not have primary systemic amyloidosis; if she did, we would expect her to have involvement of the tongue, with enlargement, and possibly invasion of the trachea and tracheal nodes. Involvement



of the skeletal muscles, skin, and GI tract may also occur. No described enlargement of the tongue, a normal GI series, and normal skin are factors against amyloidosis. Another infiltrative heart disease is hemochromatosis; this is rare in women. So it seems that both amyloidosis and hemochromatosis can certainly be excluded.

"Glycogen storage disease is not likely; there have been only eight or ten cases wherein the patient lived to the age of two years.

"We have no reference to lymphadenopathy, splenomegaly, or abnormality of the peripheral blood count to suggest Hodgkin's disease with invasion of the heart. Sarcoid can do many of these things and produce sudden death due to cardiac invasion; if this were the case, one would expect to find changes in the skin, eyes, chest x-rays, and bone. Hyperglobulinemia is not mentioned, and no mention is made of elevated serum calcium, so I suspect that sarcoid would be a pretty remote diagnosis.

"One should hesitate to make a diagnosis of coronary heart disease in the absence of a history of myocardial infarction and existent angina, but it can occur without either. Individuals can die with a big, dilated heart without ever having anginal pain or a history of myocardial infarction. When present, it usually occurs in young men who are diagnosed as having 'idiopathic cardiac hypertrophy' until the pathologist shows extensive coronary atherosclerosis with multiple infarcted areas. In this patient's age group and without history of anginal pain or a history of myocardial infarction, the possibility is quite remote.

## HYPERTENSION RULED OUT

"Hypertensive heart disease is unlikely; she had never had hypertension.

"You can make some sort of case for bacterial endocarditis. It is very carefully mentioned in three places during accounts of previous admissions that no murmurs were present, but on the last admission a grade III systolic murmur was audible over the precordium heard loudest at the apex. This is the usual location for murmurs of bacterial endocarditis. Patients in the older group may have symptoms of bacterial endocarditis masked; they don't have clubbing, hemorrhages, enlarged spleen, pallor, hematuria, fever, and changing murmur. They may have nothing more than the appearance of a murmur and evidence of congestive heart failure and suddenly die due to a small embolus from a vegetation lodging in a coronary artery. One should hesitate to make the diagnosis of bacterial endocarditis with no more evidence than the appearance of a murmur in a

very old person; however, it is something that definitely should be kept in mind.

"Hyperthyroidism or hypothyroidism are frequently missed in old people. Patients with hyperthyroid heart disease appear in heart failure invariably with auricular fibrillation, and they may not appear hyperthyroid; they don't particularly appear bug-eyed, nervous, jumpy or have weight loss, asthenia, or the cerebral changes described. Auricular fibrillation is almost invariable, so we can exclude it.

## HEART DISEASE POSSIBLE

"Myxedematous heart disease is a possibility, but the entire clinical course covering a period of 10 years is evidence against it.

"We see people die at 77 with some types of congenital heart disease—atrial septal defects or aortic stenosis. Patients may live to the age of 77 years with an atrial septal defect; however, nothing suggests atrial defect in this woman. People who have calcific aortic stenosis notoriously die suddenly without any obvious premonitory symptoms or without any warning. A murmur, first described on the third admission, probably changed the clinician's mind a little bit. He got hedgy about heart failure and hedgy about hypertension; so maybe he listened a little harder and discovered a murmur; perhaps it wasn't there before. A murmur over the precordium loudest at the apex is not rare for calcific aortic stenosis. Even though the aortic valve is up higher, this may occur. Calcific aortic stenosis should be kept in mind. I doubt if the pathologist could be able to determine the etiology of most cases of calcific aortic stenosis even after autopsy.

"Mention was made that she had rheumatoid arthritis. Maybe she had rheumatoid heart disease, but this almost invariably presents as aortitis and results in heart failure and cardiomegaly usually without aortic insufficiency associated with aortitis. Patients with rheumatoid heart disease have aortic insufficiency murmurs and dilated aortas which she was not reported as having.

## COR PULMONALE

"Rheumatoid myocarditis can occur, and so-called rheumatoid nodules have been described; whether they actually produce cardiomegaly, congestive heart failure, and sudden death is a moot question. It is true that a middle-aged woman with fulminating progressive rheumatoid arthritis can occasionally develop rheumatic or rheumatoid nodules in the conduction system; rarely this may result in death.

"So, we have gotten down to cor pulmonale—pulmonary heart disease. She had chronic bronchitis. Chronic obstructive hypertrophic pulmonary emphysema is an impressive name, but chronic bronchitis is a much better term. She probably had that and probably had chronic bronchiectasis and may have died with terminal pulmonary infection as so many of these older people do. I doubt that bronchitis, emphysema, bronchiectasis, or terminal pulmonary infection caused her death, however.

"Other chronic pulmonary diseases, none of which particularly fit her case, might be mentioned, viz, idiopathic fibrosis, often found in younger people. Hamman's disease is another way of saying idiopathic pulmonary fibrosis, but it probably should be classed with collagen disease as it embodies characteristics suggestive of collagen disease. One must also consider repeated pulmonary emboli with the production of chronic cor pulmonale. This might be regarded as subacute cor pulmonale, I suppose, because these people unload pulmonary emboli, usually over a period of two or three years—sometimes much shorter—before death. Most cases of chronic cor pulmonale last five to ten years or longer. But remember they said that she had episodes of pallor, cyanosis, nausea, and upper abdominal pain. Repeated pulmonary emboli can certainly produce subacute cor pulmonale. The cardiogram, again, does not support this.

### TUMOR EMBOLI

"Tumor emboli are a possibility. At the last admission she presented with abdominal pain. With any elderly person who has persistent abdominal pain, enough to require demerol for relief, one must consider malignancy. Malignancy may have involved the lungs coincidentally in this person, and she may have had unrelated chronic pulmonary disease for many years prior to her malignancy. She could have had tumor emboli with the production of subacute cor pulmonale or she could simply have had pulmonary embolus secondary to the coagulation abnormality seen with any cancer. Any cancer may induce a tendency to hypercoagulability of the blood and resultant pulmonary emboli. So at the end she could have been having small showers of pulmonary emboli from thrombosed leg veins due to hypercoagulability secondary to her abdominal malignancy.

"So I would say that the lady probably had chronic bronchitis with bronchiectasis, pulmonary

emphysema, and probably died with terminal acute pulmonary embolus. The embolus was probably secondary to the abdominal malignancy and unrelated to tumor emboli. This is a good stand to take, and this is probably the most logical diagnosis. There are very few things that kill suddenly. A patient who gasps and dies has a cardiovascular accident almost without exception. In most instances the etiologies include pulmonary emboli or ventricular fibrillation secondary to cardiac disease of one type or another; also, in this age group coronary heart disease must be considered.

### X-RAY FINDINGS

"The x-ray showed nothing. Chronic pulmonary disease that had been bothering her for years probably didn't kill her. However, one final look at these x-rays; no mention was made while examining her on the last admission that the heart was not enlarged. The heart has a distinctive left ventricular margin, and the diaphragm is relatively flat; pulmonary emphysema is present so that the heart is rotated a little clock-wise, and viewed from below it will appear globular. Pericardial effusion produces rotation of the heart in a clock-wise direction due to its localization and sometimes produces globular heart. Actually, effusion in itself doesn't tell you what type of heart disease is present. All you can say from a PA film of the heart is that the heart's enlargement is not specific in type. The aorta appears to be relatively free of atherosclerotic disease, not enlarged and not hypoplastic. The hilar and peripheral lung vascularities appear reasonably normal to me and quite well developed in the superior inner surface. There are no obvious hypervascularization changes; this resembles an old pleural reaction."

*Dr. Nadia Tyson:* "This was probably embolization at that time for we mentioned the possibility of pulmonic embolus. It is very hard for x-ray to differentiate a pulmonary embolus from a small infiltration or some pleural reaction."

### NO PULMONARY EMBOLUS

*Dr. Melvin:* "We expect to see a triangular density with the base based on pleura and the peak pointing toward the hilum. Actually, that doesn't occur. A pulmonary embolus can appear as anything from a solitary discrete nodule to something that looks like lobar pneumonia. This could be a pulmonary embolus except for a dense shadow, but actually over the years from 1961 to 1965 very little happened to that heart. If anything, it is on the small side.



*Dr. Tyson:* "The aorta is normal for 77, and it is not dilated."

*Dr. Melvin:* "If you just happened to look at it, you'd say it is smaller than the usual for 77, but not abnormally small—just smaller than the average. You wouldn't expect to see calcific changes unless you use special technique."

*Dr. Tyson:* "There was not enough concentration to see anything in the gallbladder, and all one could say was that there were no opaque calculi in there. Regarding GI series, I have only one film made in 1965."

*Dr. Melvin:* "You know, we always wonder why old people come in complaining of anorexia and weight loss, and when they do, we automatically sense that there is some malignancy."

*Sister Helen Marie:* "Did she have any anemia of any kind, or do you know?"

*Dr. Robert R. Gatling:* "There is no evidence in our material that she did."

*Dr. Tyson:* "She had arthritic changes in her spine; however, at 77 this is expected."

*Dr. Melvin:* "I suppose that if you really wanted to make this a museum piece, we could say she had a carcinoma of the pancreas with a non-bacterial thrombotic endocarditis and with embolization to the coronary arteries. However, I believe that she died with a pulmonary embolus, and her abdominal pain, weight loss and anorexia mentioned on her last admission were secondary to her abdominal neoplasm."

## SUDDEN DEATH

*Dr. Gatling:* "Sudden death, such as occurred in this patient, can be brought about by massive pulmonary embolism, cardiac standstill or ventricular fibrillation. Death in this case seemed to have been due to one of the latter two mechanisms. The aortic valve leaflets were calcified and fixed in approximately half-opened position resulting in a fixed aortic outlet with a total volume about 50 per cent of the expected. She no doubt experienced both aortic stenosis and incompetence. Sudden death has been observed to occur in individuals with aortic valve stenosis and is presumed to be due to asystole or ventricular fibrillation. Also to be considered is the fact that she had proven incomplete heart block of 10 years' duration.

"The most puzzling aspect of her clinical course was the failure of the stethoscope to detect a murmur before her final admission. The heart was detectably enlarged by x-ray four and one-half years before death, and no cause other than aortic stenosis has been found. Although she was said to be hypertensive, this is not substantiated by the

recorded blood pressure readings or the appearance of the kidneys. A mild degree of arteriolonephrosclerosis was present; this was signified by mild thickening and hyalinization of the glomerular arterioles, but there was no significant scarring and no significant functional renal impairment.

"Although there were scattered microscopic foci of myocardial scarring to explain conduction defects, this was not of sufficient extent to completely explain the degree of hypertrophy found. The heart weighed 600 gm.

## EVALUATION OF HEART

"The presence of a recanalized occlusion might represent a small embolus from the diseased aortic valve; although no calcium was present. Calcific emboli from diseased valves may occur more frequently than is usually suspected. The larger coronary arteries, although extensively calcified, were widely patent; small emboli could have arisen from some place within these foci of calcification or perhaps from a mural thrombus adhering to an ulcerated plaque such as often occurs within the aorta.

"The respiratory tract was another important source of chronic disabling disease. There was a fairly dense exudate of lymphocytes, monocytes, and plasma cells within the lamina propria and about the bronchial glands of a primary bronchus, and dilated small bronchi and bronchioles were surrounded by a dense exudate of lymphocytes and monocytes. This, of course, represents chronic bronchitis with bronchiectasis and explains the etiology of her cough and expectoration. Outgrowth of the cuboidal or cylindrical cells from the bronchioles or, less likely, hypertrophy of the alveolar lining cells induces the appearance seen here which is referred to as bronchiolization or adenomatosis and is frequently present in chronic pulmonary disease. These scattered instances of organized pneumonia are the footprints of incompletely resolved bronchopneumonia. No recent pneumonia was found. The small pulmonary emboli found were recent and were not large enough to have accounted for sudden death. Many thrombosed vessels were present within the broad ligaments and supplied a tangible source of pulmonary emboli.

## GALLBLADDER

"Although roentgenographic biliary tract studies were made on more than one occasion, no calculi were identified; however, the gallbladder contained four faceted, yellow-black calculi measuring 1 cm. in diameter and numerous additional smaller

# Behind continued high blood pressure readings lies the possibility of organic damage<sup>1-13</sup>

**M**ANY OF THE aspects of essential hypertension are unpredictable—either because there are a number of mechanisms involved or because individuals differ in their responses to these mechanisms.<sup>1</sup>

There is one aspect of hypertension, however, that seems, in many cases, predictable. "... when the blood pressure is elevated to a marked degree for an adequate period of time, this in itself leads to perpetuation of the syndrome with resulting vascular damage throughout the body."<sup>14</sup> All too often the disease progresses until there is damage to one of three vital organs: the heart, the kidney, the brain.



"Hypertension is certainly a major factor in the genesis of coronary heart disease, and it is even more important when compounded with obesity."<sup>4</sup>

"[Vascular deterioration] can be clearly seen in the kidney with a degree of damage that can be measured by renal function studies."<sup>10</sup>

"... most evidence suggests that reduction of blood pressure, when it is too high, not only relieves the heart of excess work but reduces vascular damage."<sup>1</sup>

"In short, treatment is indicated."<sup>1</sup>

Antihypertensive therapy will not restore the blood vessels to normal. Yet many of the vascular changes and symptoms caused by increased blood pressure may be arrested or alleviated when the blood pressure is reduced to normotensive levels.<sup>7</sup>

Reducing the blood pressure helps curtail further vascular damage and improves the prognosis — when damage is not too far advanced before therapy is started.<sup>14</sup> Essential hypertension is an indication not only for treatment, but for early and adequate treatment of the patient in question.

## Reduce the blood pressure with Rautrax-N

Rautrax-N combines the antihypertensive-tranquilizing action of whole root rauwolfia with the antihypertensive-diuretic action of bendroflumethiazide in one convenient medication. The two drugs complement each other

so that smaller doses of both are possible.

Rauwolfia combined with bendroflumethiazide is particularly effective in long-term therapy,<sup>15-17</sup> since beneficial effects do not diminish with continuous daily administration.

For most patients 1 or 2 Rautrax-N tablets daily are sufficient for maintenance therapy. The simplicity, convenience and economy of such a dosage schedule are of particular benefit to older patients.

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**Contraindications:** Severe renal impairment or previous hypersensitivity. **Warning:** Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting or G.I. bleeding occur.

**Precautions and Side Effects:** The dose of ganglionic blocking agents, veratrum or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Caution is indicated in patients with depression, suicidal tendencies, peptic ulcer; electrolyte disturbances are possible in cirrhotic or digitalized patients. Marked hypotension during surgery is possible; consider discontinuing two weeks prior to elective surgery and observe patients closely during emergency surgery. Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression, diarrhea, weight gain, edema, drowsiness may occur. Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients, and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, rashes may occur.

**Dosage and Supply:** Initial dosage, 1 to 4 tablets daily, preferably at mealtime. Maintenance, 1 or 2 tablets daily. Rautrax-N is supplied as capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin®), 4 mg. bendroflumethiazide (Naturetin®), 400 mg. potassium chloride. Also available: Rautrax-N Modified — capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin), 2 mg. bendroflumethiazide (Naturetin), 400 mg. potassium chloride. Both potencies available in bottles of 100. For full information, see Product Brief.

## RAUTRAX-N

Squibb Rauwolfia Serpentina Whole Root (50 mg.) with Bendroflumethiazide (4 mg.) and Potassium Chloride (400 mg.)

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**to help establish  
a new dietary pattern**

**Contraindications:** Dextro-amphetomine sulfote: in hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncrotic reactions to meprobamate.

**Precautions:** Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfote: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies. **Side Effects:** Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncrotic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

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stones. The common duct also contained several 0.2 cm. yellow-black calculi. One must conclude that the stones were not radiopaque, but that their presence was sufficient to account for the upper abdominal pain and probably also her anorexia.

"A random block of thyroid tissue showed the anatomic features of hyperactivity, viz, tall, cylindrical lining cells and scalloping of the periphery of the colloid. No thyroid function studies were made, but one should not be surprised if a mild degree of hyperthyroidism were present."

#### *Final Anatomic Diagnoses:*

1. Calcific aortic stenosis
2. Myocardial scarring, focal
3. Coronary atherosclerosis
4. Chronic bronchitis with bronchiectasis
5. Organized pneumonia, focal
6. Arteriolonephrosclerosis, mild
7. Thyroid hyperplasia, diffuse, mild
8. Cholecystolithiasis and choledocholithiasis
9. Diverticulosis of colon
10. Broad ligament varicosities, thrombosed

*Sister Helen Marie:* "What actually caused her sudden death?"

*Dr. Gatling:* "I suspect that she experienced cardiac standstill or fibrillation secondary to aortic stenosis, although I can't prove this. Dr. Melvin could say more about this."

*Dr. Melvin:* "That is the usual theory. As to the exact moment of death, the physiologic last straw is nebulous, and we are never able to find it. This murmur is missed a great deal. I was talking to Dr. Gatling the other day about calcific aortic stenosis after I read this clinical summary and mentioned the fact then that, at first, the murmur is easily missed.

"It would be worthwhile to clear up a few other little things; for instance, I did mention that left bundle branch block prevents proper evaluation of an infarct because of the initial positivity of the left ventricular cavity as the initial alteration of depolarization. In most cases you can't say anything else but left bundle branch block. Myocardial infarction could still have been present and still masked by the left bundle branch block. I meant to mention this about IV fluid infiltrating tissues. About 20 years ago this was mentioned as the sign of amyloid disease, but later on they

found out that it was para-amyloidosis associated with multiple myeloma. Also, malignancies, carcinomatosis, hyperproteinemic states and a dozen other things do this, so I thought I would not dwell upon that."

*Sister Helen Marie:* "She did not have a malignant tumor?"

*Dr. Gatling:* "No. She had no malignant tumor."

*Dr. Tyson:* "Nothing grossly in the left base of her lung?"

*Dr. Gatling:* "No more than elsewhere within the lower lobes."

*Dr. George F. Smith:* "Dr. Gould, in his textbook entitled *Pathology of the Heart*, makes the statement that in calcific aortic stenosis you may find the conduction defect to be due to the impingement of calcium on the annulus."

*Dr. Melvin:* "Rytand described that in Europe about 40 years ago—the clinical association of AV block, not left bundle branch block—but he described AV block in association with massive calcium deposits in and about the area of the annulus."

*Dr. Smith:* "What about the pulse configuration in the aortic stenosis?"

*Dr. Melvin:* "The characteristic pulse produced by this condition is slow, shallow, slowly rising and soft. A murmur is also present. Many of these patients have perfectly normal pulses, particularly the elderly. Loss of elasticity of the aorta results in decreased diastolic pressure. They have a normal pulse pressure and have, consequently, perfectly normal pulse."

*Dr. Smith:* "Let me ask one more question. Do you think that trauma from the jet stream produced by aortic stenosis fractures erythrocytes?"

*Dr. Melvin:* "No, there have been no cases reported; however, when a prosthetic valve is in place, it is a different matter altogether. You take a normal aortic valve out that is ragged, overgrown with calcium or atheromatous plaques, and contains little holes situated so that the blood whistles through at four, five or six times the normal velocity, and no hemolysis occurs; yet a nice, shiny prosthesis in the same place will eventuate in hemolysis in two to three per cent of the patients. It is simply mechanical trauma to the cells, breaking up the red blood cells, and yet it doesn't happen when the patient's own valve looks just as bad."

★★★

969 Lakeland Dr.



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# Radiologic Seminar LIV: Osteochondritis Dissecans

JAMES G. KRESTENSEN, M.D.  
Natchez, Mississippi

OSTEOCHONDRITIS DISSECANS is an abnormality of a joint characterized by detachment of a fragment of articular cartilage with or without a portion of subchondral bone. The detachment may be incomplete or complete, resulting in a loose body within the joint space. It is most often seen in male adolescents or early adulthood. The knee is most commonly affected, involving the lateral portion of the medial condyle adjacent to the intercondylar notch. In the elbow, the capitellum is involved; in the hip, the superior aspect of the femoral head; in the ankle, the trochlear surface of the astragalus; and in the shoulder, the medial margin of the humeral head.

The fragment may be free in the joint space or may be attached by a pedicle of fibrous tissue or cartilage, allowing some motion of the fragment. Cancellous bone may be present, and the cartilage attached may proliferate, obtaining its nourishment from the synovial fluid, until the fragment is quite large and usually oval in shape. The cartilage can implant to adjacent synovia with formation of a new pedicle.

The exact etiology of osteochondritis dissecans has been debated. It was felt by Konig, who originally described the entity, that it represented an area of silent necrosis. Others have since debated that it was due to embolic occlusion of the minute blood vessels of the distal epiphysis, possibly as a result of trauma with a resulting ischemic

necrosis. More recently Nagura has advanced the theory that the etiology is a minute fracture of the cartilage with resulting cartilage regeneration from the articular surface along both margins of the fracture line with extrusion of the fragment distal to the fracture.

Osteochondritis dissecans can be symptomless and found incidentally on roentgenograms made for other reasons. Some cases will present with an acute, painful, tender, swollen joint with some limitation of motion. Others will present with a history of trauma and chronic complaints of intermittent joint discomfort or mild effusion over some time, associated with momentary locking of the joint relieved by manipulation. Still others present with a complaint of a palpable movable body in the joint space.

Treatment varies with the clinical and radiographic findings. When the fragment has not detached, it may be treated conservatively with splinting and no weight bearing over an extended time. Others will require opening the joint and removing the fragment, if it is small, or replacing it with wire or screws, if it is large.

Radiographic findings consist of a radiolucent area, usually irregular in the early cases, and well delineated in the older cases. The area will be on the affected articular surface of the joint and may be visible on only one view. The edges of the area may appear somewhat sclerotic or dense if the fragment has completely detached. With calcification, the fragment may be identified in the joint as a "joint mouse."

★★★

Jefferson Davis Memorial Hospital

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*Figure 1. Radiolucent areas on the articular surfaces of affected joints representing osteochondritis dissecans in an 18-year-old male. This case involved the right knee. Other joints were not affected.*



*Figure 2. This case of osteochondritis dissecans involved the right knee of a 12-year-old male with other joints not affected. Radiolucent areas on the articular surfaces of affected joints are shown.*

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#### POSTPARTUM PAYMENT

A women's literary club of modest means asked a distinguished physician to appear as the speaker at one of their meetings. In extending the invitation, the president wrote: "We would be most honored to have you address our club, but we are able to pay you a fee of only \$25."

Responded the great physician: "I accept. Until 1940, that's what I got for delivering a baby."



# The President Speaking

‘Our Voices Count’

JAMES T. THOMPSON, M.D.

Moss Point, Mississippi

ELECTION OF A CONSERVATIVE CONGRESS is the chief campaign issue next month as far as American medicine is concerned. Many feel, and with good reason, that any move toward the conservative right is a step in the proper direction, because this is the only hope for slowing down the runaway domestic spending programs of the administration. And there's plenty on the health and medical legislative agenda for the 90th Congress next January, be assured of that.

If physicians will give only a little time and a little substance to this effort through their Mississippi Medical Political Action Committee, they can contribute substantially and influentially toward helping in this worthy undertaking. MPAC is back in business in a big way with a big job to do. Its 10 directors, including a representative of the Woman's Auxiliary, are organizing at the local level. They are asking for your dues and your good influence now.

That modest portion of our dues which we send to AMPAC at national level helps not only Mississippi but other states as well where a little support can turn the tide toward the election of a conservative, be he Democrat or Republican, because the voting record is what counts. It is in the "swing districts" that PAC's are most effective, and many of the liberal freshmen who rode into office on the coattails of the national administration in 1964 are clearly in political hot water. A switch of 40 to 60 seats in favor of conservatives in the House of Representatives could and would make an impressive difference, since the administration has carried some of its domestic programs through by skinny margins.

Let's act now when our voices count the most.

★★★





## Asynchronosis: Infection by the Virus of Time

### I

AN AMERICAN TOURIST boards a trans-Atlantic jet in New York at 7 o'clock in the evening, enjoys a martini and dinner, sees a first-run movie, and is deep in a best-seller when the big plane heads out over the Great Circle to Europe after passing south of Goose Bay. He lands at Shannon at 6 the next morning, takes a limousine to a hotel, but declines breakfast. As far as he is concerned, it's after midnight and time to go to bed.

A British diplomat, bound for a new post at Washington, arrives at New York on *H.M.S. Queen Mary* at noon. He is quite ready for lunch, and apart from missing tea en route to Washington on the afternoon train, he finds nothing unusual about having dinner at 8 at the embassy.

A pair of Gemini astronauts blast off into earth orbit from Cape Kennedy at 10 in the morning and hurl around the globe at 18,000 miles per hour for three days. When they splash down in the South Atlantic after having seen the sun rise 16 times a day, they do not find it odd to be ready for a night's sleep when the day shift crew members turn in.

The tourist, the diplomat, and the astronauts have two things in common: Each has been involved in east-west travel, and each has crossed half a dozen to 500 time zones in the process. There have resulted two distinctly different physiological responses to the experiences, one normal

and the other, upsetting. The diplomat, traveling by ship, and the astronauts, by space vehicle, had little or no problem. The tourist in the 600 mph jet experienced asynchronosis for the simple reason that he was unable to take his time-oriented routine with him.

### II

Both the medical literature and popular press are replete with papers and articles on circadian rhythm or the day-night cycle and how a human being relates to it in biological adaptation. Even the botanists can demonstrate the cycle in plants. More recently, the celebrated explorer-author, Lowell Thomas, has written about man's biological clock which he calls a mysterious inner timer, sensitive to jet travel.

But it has remained for Dr. Hubertus Strughold, the German aerospace medical pioneer, to describe the syndrome and to assign it a rational name: asynchronosis. Many Mississippi physicians who had the opportunity to discuss this phenomenon with Dr. Strughold during the 94th Annual Session in 1962 when he appeared before the Symposium on Space Medicine will recall his fascination with the subject.

Strughold believes that asynchronosis is a measurable disturbance of physiologic and mental function attributable to sudden change of the day-night time cycle to which the individual has become adapted. Its course is transitory, disappear-

ing in 24 to 72 hours as readjustment to the new time environment is established. The remedy is both predictable and demonstrable. Air lines provide for crew rests after east-west jet travel involving the crossing of four or more time zones. Many businessmen are careful to allow a day or two following a long trip by jet before scheduling important conferences.

## III

As the phenomenon is studied further, new evidence is being discovered to suggest that there are degrees of asynchronosis, some of which may be quite serious. Where the traveler maintains a frequent and demanding travel schedule involving east-west itineraries, there appears to be a build up in the degree and extent of the physiologic disturbance, sometimes resulting in physical collapse.

It is appreciated that cyclic characteristics of digestion-assimilation, metabolism, activity and rest, and other physiologic functions are not independent of each other, despite chronological differences. Extended exposure to rapid and radical time zone change appears to disrupt not only these individual systemic functions but also their delicate balance and interdependent relationships one with another.

Apart from fatigue of the excitement and enforced inactivity of jet travel, there is no evidence to suggest that the experience in and of itself induces asynchronosis or any other untoward effect. It is, of course, assumed in this connection that the cabin pressurization system functions normally and quite naturally excludes motion sickness to which many are susceptible. In fact, those traveling *at the same rates of speed over the same distances* as the east-west victim but in a north-south direction do not experience the disturbance, because they either remain in the same time zone or cross to another very slowly. In effect, they are carrying their familiar time environment with them.

## IV

There is an intriguing relationship, then, among the diplomat who crossed the Atlantic aboard the *Queen Mary*, the astronauts in orbit, and those traveling by jet on a north-south journey: Each managed to maintain his respective time environment. The ship passenger, having his environment adjusted for him as he traveled at 30 knots across the Atlantic, experienced the time changes slowly.

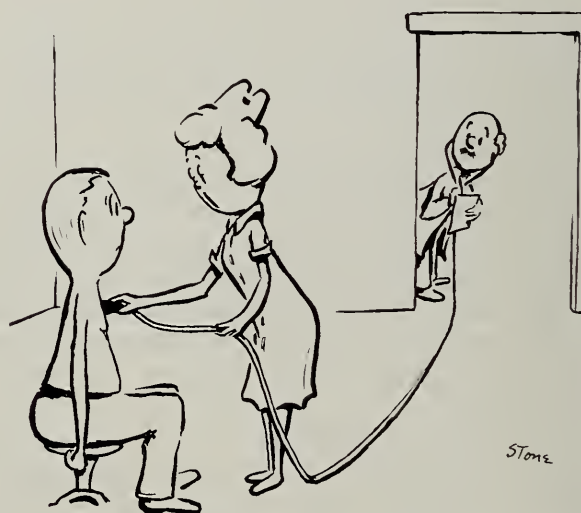
The astronauts, on the other hand, crossed a time zone every three to four minutes but carried out the technical details of their mission as well as physiologic function with constant reference to the time zone of the Manned Space Flight Center at Houston. The north-south jetting passenger really never left his biological home in time, because he crossed parallels of latitude, not meridians of longitude.

It remained, then, only for the east-west jet passenger, traveling at a substantially intermediate speed between that of the *Queen Mary* and the orbiting Gemini vehicle, to sustain the discomforts of asynchronosis.

This raises the interesting question of what will happen with the advent of the supersonic jet transport in the next five years. The first such aircraft will be the Concorde, the British-French plane, designed to fly at about 1,500 miles per hour and slated to enter service next year. The American SST, due by 1970, is described as a 2,000 mph aircraft. Will it be possible to avoid altogether the physiologic disturbance of asynchronosis resulting from 600 mph travel by conventional jet?

Some think that it will, because the hour and a half trip by SST from New York to Los Angeles and the two hour trip from Washington to London may amount to little more than delay of lunch or an hour off schedule in getting to bed. A trip half way around the world, however, may be another story.

The problem of asynchronosis is trivial beside the enigmas of cardiovascular disease and cancer. Yet, it merits study and investigation, not only for the end of understanding and, hopefully, of mitigating the effects of the phenomenon but also for



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the promising goal of knowing more of the life processes.—W.M.D.

## In the Deadly Summertime

The good old summertime is deadly, at least as far as accidental death to Americans is concerned. New studies by the Metropolitan Life Insurance Co. disclose that 27 per cent of all annual accidental deaths occur in June, July, and August.

As expected, 54 per cent of all drownings are summer tragedies, and this high toll figure excludes drownings from water transportation. A substantial 28 per cent of all motor vehicle-related deaths take place in the June-August period, but poisonings by lethal gasses and vapors are at an annual low with only 9 per cent.

Deaths by accidental electrocution are higher in the summer months with 45 per cent of all such annual fatalities occurring then. Fatalities resulting from firearms is slightly off at 22 per cent before zooming much higher in the fall and winter hunting seasons. All in all, more than 27,000 of the annual toll of 100,000 accidental deaths happen at the most pleasant time of the year.

The study says that heightened summertime activity in motor vehicle use, water sports, use of outdoor machinery, and maintaining of electric power lines is the culprit. And even the nonfatal accident rate shows a distinct upswing: Between June and September, 1 in 10 American males and 1 out of 16 females sustained nonfatal injuries resulting in a need for medical attention.

And with fall just getting under way, it's a good time to think about that firearms toll, too.—R.B.K.

## Commitment After Acquittal

An unusual if not precedent-setting bill providing for commitment to mental institutions for some individuals *who have been acquitted of crimes* has been introduced by Sen. Robert F. Kennedy (D., N. Y.). The measure, S. 3689, would permit detention or commitment of a person who has been acquitted of a crime in federal court for a period up to 60 days if his plea were insanity.

In this period, the former defendant must be detained and examined in a hospital, not a jail, by two qualified psychiatrists, one of whom may be chosen by the former defendant himself. The physicians would be obliged under the law to file their reports with the court within 30 days, and a hearing on the medical findings would have to be held within another 30 days, but in no event could the 60 day limitation be exceeded.

To invoke the 60 day detention of an individual acquitted, the federal court would have to make a finding that release of the person "would endanger the officers, property, or other interests of the United States." If such an order were not issued by the court, the former defendant would be turned over to state authorities. Where a psychiatric finding is made that the individual "is a danger" to the United States, he would be remanded to the custody of the Surgeon General of the U. S. for mandatory treatment, presumably in a status of involuntary commitment.

Release from such commitment, under the proposed law, may be conditional or unconditional. If, however, the individual is institutionalized for a period of time equivalent to the maximum possible sentence he might have received if found guilty, he must receive a hearing as a matter of right.

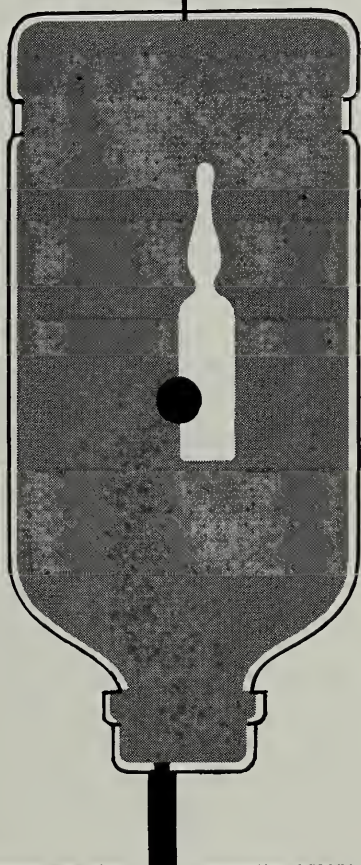
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**COMPOSITION:** Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

**ADMINISTRATION AND DOSAGE:** Dosage, based upon body weight and Gm. Hb/100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. Initial test doses are advisable. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

**SIDE EFFECTS:** Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylatoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache and fever have occasionally been reported.

**PRECAUTIONS:** If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

**CONTRAINDICATIONS:** Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only it is contraindicated in other anemias.

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This is a far-reaching proposal, perhaps more judicial than medical in nature. But its enactment would place the brunt of responding to the courts squarely upon physicians. Such proposals require careful study and cautious consideration.—R.B.K.

## DUnkirk 1-5111

Seven years ago, two Los Angeles psychologists persuaded the U. S. Public Health Service to finance a visionary idea. They wanted to establish a suicide prevention center and try to prevent what is probably the least understood form of preventable death. Last year, more than 4,000 potential suicides or their families and friends called DUnkirk 1-5111, the now-famous SPC telephone number in Los Angeles, and every call got professional attention from the 12 member staff.

Manned around the clock, the Los Angeles SPC tries to keep the would-be suicide talking until help can be sent. Each call is carefully followed up, and arrangements are made for intensive psychiatric, psychological, and social investigation of the individual who has sought help in his suicidal plight.

The center also offers its services in consultation with physicians and agencies of the community, and it collects and analyzes data to obtain a better understanding of suicide and its prevention. The USPHS continues to support the center, but the grant is now administered by the University of Southern California School of Medicine.

And isn't it rarely coincidental that the SPC telephone is on the Dunkirk exchange—a name that stands in military history for rescue from almost certain death?—R.B.K.

## MS Diagnosis Film Is Available

A new medical film on diagnostic techniques for multiple sclerosis is available for showing to professional audiences through the Central Mississippi Chapter of the National Multiple Sclerosis Society.

The film may be obtained on loan without charge by writing the chapter at Box 10072, Northside Station, Jackson.



## PERSONALS

W. H. ANDERSON of Booneville was the recent featured speaker at the regular meeting of the Northeast Mississippi Historical Society. He is the senior living past president of the Mississippi State Medical Association, having served during the 1940-41 year.

A. L. BALL and JAMES L. KUROWSKI have joined the staff of the Washington County Health Department. Dr. Ball is a native of the Philippine Islands and attended the University of Connecticut before receiving his M.D. at Marquette. Dr. Kurowski was born at East St. Louis and received his premedical and medical education at Creighton University.

JOHN D. BOWER and TEMPLE AINSWORTH, both of Jackson, are leaders in the newly organized Mississippi Kidney Disease Foundation. A principal project of the voluntary health agency is support of the chronic hemodialysis unit at the University Medical Center. Dr. Ainsworth is serving as president-elect of the Mississippi State Medical Association.

MED SCOTT BROWN of Meridian has announced the association of RICHARD C. FLEMING in the practice of internal medicine at 1302—21st Ave.

LAURENCE J. CLARK, JR., of Vicksburg has announced the opening of his offices at 1316 Monroe St. His practice will be limited to internal medicine with consultation in gastroenterology and chest diseases.

J. P. CULPEPPER, JR., of Hattiesburg was guest speaker at the recent luncheon honoring the senior class of the Methodist Hospital School of Nursing. Dr. Culpepper is serving his eighth term as Delegate to the American Medical Association.

WILLIAM H. DAWKINS has opened his offices for general practice at Raleigh after discharge from the Navy as a medical officer. He received his premedical education at Ole Miss and was graduated from the University of Mississippi School of Medicine in 1963. Following his internship at the Mississippi Baptist Hospital at Jackson, he entered naval service and was stationed at the U.S.N. Auxiliary Air Station at Meridian. On separation from the service, he received a letter of commendation from the commanding officer.



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**Precautions:** As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

**Side Effects:** Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have occasionally been noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by the administration of thiazides.

**Contraindications:** Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

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## PERSONALS / Continued

C. C. HIGHTOWER, SR., of Hattiesburg was among 19 Rotarians recently honored for 20 or more years of service and continuous membership. An Emeritus member of the Mississippi State Medical Association, Dr. Hightower is the only surviving charter member of the Hub City club.

MYRON W. LOCKEY has announced the opening of his offices at 304 Medical Tower in Jackson. He will limit his practice to ear, nose, and throat.

R. H. MCARTHUR of Jackson has announced the removal of his offices to 503 Medical Arts Building where he will continue to limit his practice to otolaryngology.

ANDREW K. MARTINOLICH, JR., of Bay St. Louis has been installed as faithful navigator of the Fourth Degree Knights of Columbus. He is a member of the board of directors of the Mississippi Hospital and Medical Service, Blue Cross-Blue Shield.

CHARLES L. NEILL of Jackson was the recent featured speaker at the Forrest County School Foundation in Hattiesburg. He is president of the Council School Foundation of Jackson.

EDWARD R. NORTH, JR., of Jackson has been installed as vice president of the Northwood Exchange Club.

J. K. OATES, JR., has announced the opening of his offices at 4513 Highway 80 West in Jackson where he will limit his practice to internal medicine.

ROBERT L. PEEDE has joined the staff of the Brandon Clinic and Rankin County Hospital where he will do general surgery. Other members of the clinic are ROBERT A. RAINES, CURTIS D. ROBERTS, and RICHARD E. SCHUSTER.

KENNETH P. PITTMAN and GEORGE BALL have announced their association in the Ball-Pittman Clinic at 805 Westland Plaza in Jackson. Their practice will be limited to obstetrics and gynecology.

EVERETT E. ROBINSON has become associated with the Laurel Bone and Joint Clinic. Other members are JAMES C. BASS, JR., and E. JEFF HOLDER. Dr. Robinson will limit his practice to neurological surgery.

JAMES A. SHEFFIELD and WILLIAM J. CARR, JR., of Gulfport have announced the removal of their offices to 450 Pass Road.

WALTER H. SIMMONS of Jackson was one of the two top membership producers in the recent Chamber of Commerce campaign. The effort has turned in 219 new chamber memberships in the program to add 300 new member units.

T. W. TALKINGTON of Jackson has opened his offices for the practice of orthopaedic surgery at 1815 Hospital Drive in Jackson. The newly developed clinic area is adjacent to the Hinds General Hospital.

WILLIAM C. TOUCHSTONE has announced the opening of his offices at 238 Woodland Center in Forest.

GENE T. WALKER has joined the staff of the Street Clinic at Vicksburg in the Department of Obstetrics and Gynecology. A graduate of Millsaps College, he received his medical training at the University of Tennessee School of Medicine. He has had five years of postgraduate training at John Gaston Hospital at Memphis and Hazard Memorial Hospital in Kentucky. He was recently discharged from the Navy with the grade of lieutenant commander. At the Street Clinic, Dr. Walker will limit his practice to obstetrics and gynecology.

ROYAL W. WILLIAMS of Greenville has retired as director of the Washington County Health Department after 12 years of service. He is a 1919 graduate of Jefferson Medical College at Philadelphia and came to Greenville after serving 14 years with the U. S. Public Health Service. Dr. Williams will continue to make his home in Greenville.



## DEATHS

AVENT, JAMES KIRL, SR., Grenada. M.D., Tulane University School of Medicine, New Orleans, La., 1921; interned Illinois Central Railroad Hospital and Charity Hospital, New Orleans, La.; fellow, American College of Surgeons; former member of the Mississippi State Board of Health and the Board of Trustees of Mental Institutions; past president of the Mississippi State Medical Association; died Aug. 29, 1966, aged 71.

LUSK, WILLIAM JEFFERSON, Ruleville. M.D., College of Physicians and Surgeons, Memphis, Tenn., 1910; died Aug. 10, 1966, age 78.



# Why is one man's gastric ulcer another man's duodenal?



**Geographic variation** in the *incidence* of peptic ulcer is a familiar fact. But the proclivity of certain *kinds* of ulcer for certain geographic areas is a recently recognized phenomenon.<sup>1,2</sup>

For example, in one particular Norwegian fishing village there is a tendency for patients to develop a gastric ulcer; anywhere else in Norway, ulcers are usually duodenal. Peruvians high in the Andes have more gastric ulcers than their compatriots in the lowlands. Why? Nobody knows.

**Social variations, too.** Even in the same geographic areas there are interesting variations. An Englishman's ulcer depends on his social standing—professional men suffer with duodenal ulcers, while workingmen have more of the gastric variety. In southern India the pattern is reversed. Here, duodenal ulcers are common among laborers and agricultural workers and rare among the upper classes.

Investigators are exploring every possible theoretical avenue in their search for the cause of peptic ulcer. Of all the factors implicated in ulcerogenesis, the one that is generally acknowledged to be of primary importance is hypersecretion of gastric acid.<sup>3-8</sup> Or, as one author states it: "The medical management of peptic ulcer pharmacologically is, in the final analysis, concerned largely with the effective inhibition of peptic activity."<sup>3</sup>

Robinul (glycopyrrolate) provides potent, rapid, specific antisecretory action confirmed by gastric analyses and x-ray evidence of clinical effectiveness.<sup>3,7,9-12</sup> Relieves pain with "impressive" promptness.<sup>8</sup> Quickly alleviates acute discomfort, and effectively counteracts gnawing pain, preprandial midepigastric pain, belching and other ulcer symptoms.<sup>7</sup> Suppression of nocturnal pain is "outstanding."<sup>13</sup> Maximally effective doses may be given with minimal side reactions, and the incidence of unwanted anticholinergic effects is negligible.<sup>3,7-14</sup>

**no matter what the ulcer theory...the fact is that**

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*(brief summary follows)*

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**Contraindications:** Glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric retention, prostatic hypertrophy, duodenal obstruction, cardiospasm (megaesophagus), and achalasia of the esophagus, and in the case of Robinul-PH Forte, sensitivity to phenobarbital.

**Precautions:** Administer with caution in the presence of incipient glaucoma.

**Adverse Reactions:** Dryness of the mouth, blurred vision, urinary difficulties, and constipation are rarely troublesome and may generally be controlled by reduction of dosage. Other side effects associated with the use of anticholinergic drugs include tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsiness, and rash.

**Dosage:** Dosage should be adjusted according to individual patient response. Average and maximum recommended dose is 1 tablet 3 times a day: in the a.m., early p.m., and at bedtime. *See product literature for full prescribing information.*

**Supply:** Robinul (glycopyrrolate 1 mg.); Robinul Forte (glycopyrrolate 2 mg.); Robinul-PH (glycopyrrolate 1 mg.) with phenobarbital 16.2 mg. (Warning: May be habit-forming); Robinul-PH Forte (glycopyrrolate 2 mg.) with phenobarbital 16.2 mg. (Warning: May be habit-forming.) In bottles of 100 and 500 scored tablets.

**References:** 1. Jones, F. A., and Gummer, J. W. P.: Clinical gastroenterology, Springfield, Ill., Charles C Thomas, 1960, pp. 322-3. 2. Bockus, H. L.: Gastroenterology, 2nd ed., vol. 1, Philadelphia, Saunders, 1963, p. 468. 3. Sun, D. C. H.: Ann NY Acad Sci 99:153 (Feb. 28) 1962. 4. Moore, V. A.: Postgrad Med 38:216 (Sept.) 1965. 5. Dragstedt, L. R., Woodward, E. R., Storer, E. H., Oberhelman, H. A., Jr., and Smith, C. A.: Ann Surg 132:626 (Oct.) 1950. 6. Posey, E. L., Jr., Smith, P., Turner, C., and Aldridge, J.: Amer J Dig Dis 10:399 (May) 1965. 7. Lamphier, T. A., Siegel, L., and Goldberg, R. I.: Amer J Gastroent 37:551 (May) 1962. 8. Kasieh, A. M., and Fein, H. D.: Ibid 39:61 (Jan.) 1963. 9. Epstein, J. H.: Ibid 37:295 (Mar.) 1962. 10. Moeller, H. C.: Ann NY Acad Sci 99:158 (Feb. 28) 1962. 11. Slinger, A.: J New Drugs 2:215 (Jul-Aug.) 1962. 12. Barman, M. L., and Larson, R. K.: Amer J Med Sci 246:325 (Sept.) 1963. 13. Shutkin, M. W.: Amer J Gastroent 38:682 (Dec.) 1962. 14. Flesher, B.: J New Drugs 2:211 (Jul-Aug.) 1962.

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## UMC Is Training Cytotechnologists

The University Medical Center has established a grant-supported training program in cytotechnology to help meet the need for these specially trained persons. Records show that in Mississippi there are currently only six certified cytotechnologists at work.

A \$21,200 grant from the Division of Chronic Disease, U. S. Public Health Service, to Dr. Carl G. Evers, will finance the program during its first year. It will be administered by the Department of Pathology.

The 12-month program, which accepted its first applicant this June, consists of six months of classroom activities and six months in a cytotechnology laboratory. Four grant-supported scholarships paying stipends of \$200 monthly for the first six months will be available for the four applicants accepted each January and June. Students will also be compensated for laboratory work.

Students who successfully complete the program will receive certificates from the University of Mississippi School of Medicine and will be eligible to take examinations for certification as cytotechnologists of the Board of Registry of Medical Technology of the American Society of Clinical Pathologists.

## Rehab Seminar Is Held at Med School

The Challenge of Functional Restoration was the topic for a rehabilitation seminar held at the University Medical Center Sept. 23 and 24. Movies, lectures, panel discussions and demonstrations were included on the two-day program.

Guest lecturers were Dr. William Spencer, director of the Texas Institute for Rehabilitation and Research; Dr. Edward Holmes, associate regional representative, health and medical affairs, Department of Health, Education and Welfare; Dr. William Fleming, medical director, Spain Rehabilitation Center, University of Alabama; Dr. James Garrett, assistant commissioner, research and training, HEW, Washington; and Dr. Thor-kild Engen, clinical assistant professor of orthotics at Baylor University College of Medicine.





### Book Reviews

**Current Pediatric Therapy (1966-1967).** By Sidney S. Gellis, M.D., Professor and Chairman, Department of Pediatrics, Tufts University School of Medicine and Benjamin M. Kagan, M.D., Professor of Pediatrics, University of California School of Medicine. 956 pages. Philadelphia: W. B. Saunders Company, 1966. \$17.50.

This highly authoritative book on pediatric therapy has been updated since the first edition two years ago. The authors have added many new articles and rewritten many of the articles in the previous edition. New contributors are evident as different approaches in therapy are discussed.

This book is presented in sections, with diseases of like nature in each section. The book is well indexed. There is an excellent section on acute poisoning and the Poison Control Centers in each state are listed. There is also a roster of drugs which gives trade name, generic names, and dosage forms. The authors assume a diagnosis has been made by the physician and no attempts are made to discuss diagnoses. Therapy is given in concise but clear terms as to the best method for treatment in children.

It is interesting that the first section of the book deals with nutrition, and obesity is the first disease discussed. Some very interesting observations on the treatment of obesity are presented. The author stresses that a pill to curb the appetite is not the cure for obesity in children.

The section on the tonsil and adenoid problems has not been changed in the new edition and will not need to be changed in the next edition. The author's observation that there are no universally accepted criteria for tonsillectomy still holds true. No words are minced in this article about the abuse of tonsils in our children. I would hope that all physicians who treat children could read this section.

The section on infectious diseases has been brought up to date with the inclusion of the newer antimicrobial drugs. The article titled

**Judgement in the Use of Antimicrobial Agents** is excellent.

In general this is an excellent book and should be of value to the busy practitioner, whether family physician or pediatrician. The field of therapy changes rapidly and this book is a useful tool for each practicing physician.

W. E. CALDWELL, M.D.

**Diseases of the Heart.** By Charles K. Friedberg, M.D., Cardiologist to the Mount Sinai Hospital and Associate Clinical Professor of Medicine, College of Physicians and Surgeons, Columbia University. 1787 pages with illustrations. Philadelphia: W. B. Saunders Company, 1966. \$22.00.

Ten years have passed since we saw the last edition of this series. The mass of cardiologic data and the quality of investigation have demanded revision and this book reflects this increase in knowledge in the field of cardiology with an addition of almost seven hundred pages. The already adequate bibliography has been greatly enlarged and modernized to date with almost all the references being publications since the last edition.

This revision, in addition to new material, has given us many new chapters, both in physical diagnosis and in description of graphic methods. Series on electrocardiography, vector-cardiography, phono-cardiography, and various pulse measurements along with cardiac catheterization, diet studies and radioisotope studies, have all been included in this new edition, along with the discussion of various diseases in which they are applicable. Although the preface to the third edition states that angiocardiology has been recognized by the addition of a chapter on selective angiocardiology, the quality and the extent of the pictorial data is somewhat disappointing, especially in a field of such vital importance. However, coronary arteriography has been presented in some rather simplified chapters along with the dye visualization of renal disease and allied subjects.

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**Reference:** 1. Roberts, C. E., Jr.; Perry, D. M.; Kuhoric, H. A., and Kirby, W. M. M.: A. M. A. Arch. Int. Med. 107:204 (Feb.) 1961.

\*Each bidCAP contains: Tetrex (tetracycline phosphate complex equivalent to 500 mg. tetracycline HCl activity).

## LITERATURE / Continued

Newer therapies are entirely up to date and such novel medications as ethacrynic acids and triamterene are covered completely in this new edition. The usual, complete, and detailed therapy of emergencies has been repeated and the more recent work on digitalis is available for review purposes. The discussion of arrhythmias due to digitalis has been greatly enlarged and the methods of recognizing digitalis toxicity, treating digitalis-induced arrhythmias and the description of cardioversion are all complete and helpfully clear.

If there is any defect in this book, it is in the field of indications for cardiac surgery, preparation for cardiac surgery, post-operative care of the cardiac surgical case and the evaluation of techniques, prosthetics and long-term evaluation. However, this may be forgiven on the basis that this is not a book on surgery, although, I feel that such knowledge as mentioned above is necessary for any internist or cardiologist to intelligently manage the potential surgical cardiac. One of the few disappointing features of this edition is the continued lack of detailed clinical description of the rare cardiac syndromes. Most of these are covered in paragraph, or at most, in page form and by no means can a complete and comprehensive clinical picture be achieved through such summarial treatment. Cardiologist and internist deserve better from a reference text. However, one must give credit where credit is due, and admit that many recent physiological studies, particularly involving the law of the heart, studies of cardiac muscle, theories of myocardial contraction, chemistry of the catecholamines and other important topics are well covered and, indeed, covered completely in this new edition. All in all, I would highly recommend this book as a reference volume. One can find almost any subject in the index and the bibliography is so complete that, with a little additional work, even the rarest of subjects can be investigated ad minutae.

JOSEPH P. MELVIN, M.D.

## Journals

**Otitis Media in the Practice of Pediatrics** by John Dixon Coffey, M.D., Natchez, Miss. *Pediatrics* 38:25-32 (July) 1966.

Bacteriological and clinical studies were made on 267 infants and children in the author's private practice. Exudate was obtained with the Senturia Ear Specimen Collector. Pneumococci and *hemophilus influenzae* were the organisms most fre-

quently isolated and occurred with equal frequency. *Streptococcus hemolyticus* was infrequently found. *Neisseria catarrhal* was isolated in pure culture from 5 per cent of the patients, usually in infants with a mean age of one year and who were not acutely ill. They were frequently intracellular in direct smears, suggesting pathogenicity of at least low virulence.

Most of the cases were in the infant age group; only 25 per cent were brought in with ear complaints. Ten cases of otitis media with myringitis bullosa were studied; six of these showed pneumococci; three, *hemophilus influenzae*; and one, with both organisms. Relapses were frequent and often from different organisms.

## New, Bigger Directory Will Have ZIP Codes

The 1967 *Directory of Mississippi Physicians* will be 90,000 digits fatter than any previous edition with the addition of ZIP codes. The association's central office said that the new *Directory* will be off the presses and ready for shipment in four to six weeks.

Following the general format used in 15 past issues, the 1967 edition will be divided into 110 sections including 27 alphabetic, 82 county, and one out-of-state. The new volume is expected to exceed 100 pages and will be a heavy stock paperback.

Members of the association need not order the 1967 edition, the announcement said. The *Directory* is furnished each member in good standing as a benefit of membership. Nonmembers are charged \$5 per copy.

Also announced is continuation of the Monthly Directory Supplement service, available only on \$6 per year subscription. Issued on the last day of each month, the Supplement lists all permanent and temporary removals of Mississippi physicians, changes of address, new physicians, changes of status, licensure information, and reports of death. It is published in continuous pagination for ease in use.

The *Directory* lists all current Mississippi medical licentiates, their addresses, counties, and cities. Keys, codings, and form of printing indicate membership in local societies, the state medical association, and AMA. Military status and career federal medical officers as well as retirees are shown. Also indicated are physicians in a training status.





# 99th Annual Session Is Shaped Up for Biloxi by Council on Scientific Assembly

Final plans for the format and scheduling of the 99th Annual Session of the Mississippi State Medical Association were adopted by the Council on Scientific Assembly meeting at Biloxi in August. Dr. James L. Royals of Jackson, council chairman and secretary-treasurer of the association, predicted a top flight program and record attendance for the Gulf Coast.

"We are placing new and added importance on the scope and content of the general scientific sessions," Dr. Royals said. "Each of the seven formal sections is carefully coordinating programs

and is working actively with the several specialty societies," he added.

Following the new format which has proved satisfactory for two years, the 99th Annual Session will open on Monday, May 15, 1967, with the House of Delegates. To avoid conflict with scientific sessions, all reference committee meetings will take place that day, Dr. Royals said. The only exception is the Nominating Committee which historically meets on Wednesday of the annual session.

The Tuesday, May 16, program will feature



*Taking time out during a two day meeting in Biloxi for the JOURNAL camera are members of the Council on Scientific Assembly. Seated, from the left, are Drs. George E. Gillespie, Temple Ainsworth, president-elect, James L. Royals, chairman, James*

*T. Thompson, president, Chester H. Lake, and Paul B. Brumby. Standing, from the left, are Drs. J. Lee Owen, Shelby W. Mitchell, William E. Weems, William C. Kellum, C. R. Jenkins, Seth H. Barron, and John E. Lindley.*

## ORGANIZATION / Continued

obstetrics and gynecology in the morning and surgery in the afternoon. As many as 10 papers are expected.

A morning session on general practice and preventive medicine open the May 17 program on Tuesday with medicine occupying the spotlight that afternoon. The Thursday, May 18, morning program will be highlighted by concurrent general sessions on pediatrics and eye, ear, nose, and throat. Members of the latter section will continue in another important meeting as the Louisiana-Mississippi O and O Society convenes May 19-20.

The adjourned meeting of the House of Delegates is slated for Thursday afternoon when 1967-68 officers will be elected and final actions will be taken on reports and resolutions.

The Buena Vista Hotel and Motel will be headquarters for the meeting, Dr. Royals said. Additional blocks of air conditioned rooms will, however, be available in adjacent hotels and motels.

The annual social occasion is set for the evening of May 17, and the council said it would follow the popular fun theme type of event initiated in 1965 with the Hawaiian Luau. The 1966 fun evening was a Latin American Fiesta. The council said that an announcement of the gala 1967 event "would be made to the membership soon."

Also set to meet will be more than 15 specialty societies with luncheon and banquet occasions. Most will have scientific or business meetings, the council said. Medical alumni from Ole Miss, Tennessee, Tulane, and Vanderbilt are planning fellowship and reunion occasions.

The Buena Vista will be the scene of the technical and scientific exhibits as well as meetings of the House of Delegates. All general scientific sessions are scheduled for the facility.

Meeting with executives of the hotel, the council heard reports that fire damage sustained by the famed resort hostelry in July would be fully repaired this year. The management has continued its modernization program with extensive renovation of the lower floors of the east wing, and further improvements are scheduled.

Representatives of the scientific sections said that program topics and essayists would be selected prior to Jan. 15, 1967. The program will be carried in a special issue of the April JOURNAL.

Attending and participating in the two day council meeting were Drs. Seth H. Barron of Columbia, EENT; Paul B. Brumby of Lexington

and C. R. Jenkins of Laurel, General Practice; William E. Weems of Laurel and William C. Kellum of Tupelo, Medicine; Chester H. Lake of Jackson and John E. Lindley of Meridian, Obstetrics and Gynecology; J. Lee Owen of Jackson, Pediatrics; Shelby W. Mitchell of Ellisville, Preventive Medicine; George E. Gillespie of Jackson, Surgery; and Dr. Royals, the chairman.

Drs. James T. Thompson of Moss Point, president, and Temple Ainsworth of Jackson, president-elect, *ex officio* member of the council, were active in the meeting.

Dr. Royals said that a number of innovations will be instituted at the 1967 annual session including special showings of selected medical motion pictures prior to the morning scientific sessions.

## State Is Implementing 'Battered Child' Law

Representatives of the state medical association met with officials of the Mississippi Department of Public Welfare, law enforcement agencies, the Mississippi Hospital Association, and an advisory panel of five judges to implement the state's new Battered Child law enacted by the 1966 regular session of the legislature.

The measure was written and sponsored by the Mississippi State Medical Association which has sought its passage by the lawmakers since 1962. In the recent legislative session, there were four versions of the law before the solons, but the state medical association version was the most comprehensive.

The enactment amends the Mississippi Youth Court Act and provides not only for action in battered child cases but in cases of neglect as well. It permits the child to be removed from the injurious environment either temporarily or permanently, but only on court order after professional welfare investigation. Mrs. Sarah Caldwell of the State Department of Public Welfare holds responsibility for statewide administration of the program.

The judicial panel, appointed to advise and assist in the law's implementation, praised the enactment and called it a forward step in social legislation. The Mississippi enactment is much stronger and broader than those of most other states. One version introduced in the legislature made child abuse only a misdemeanor and contained no provision for protection of the child.

At least one application has already been made





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## ORGANIZATION / Continued

of the new law with the reporting of child injury by parents in the southern part of the state. Physicians and others reporting suspected child abuse are immune from civil suit, even though the reported impression of abuse is not upheld.

Welfare and law enforcement officials said that a simple and direct method of making reports would be established. Physicians will be able to deal with those best qualified to investigate suspected battering or neglect, they added.

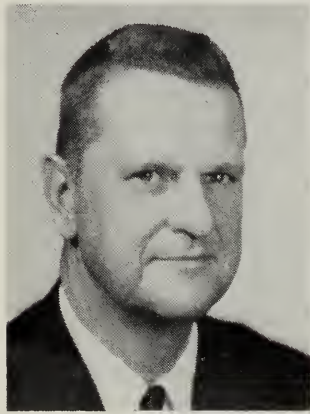
In addition, the new law will be the subject of a special panel discussion at the December meeting of Mississippi judges at Biloxi. Medical association representatives have been invited to participate in the meeting.

### Dr. Wilson Is Named AHA President-elect

Dr. David B. Wilson of Jackson was named president-elect of the American Hospital Association as the House of Delegates elected new officers

at the close of the August annual convention. Dr. Wilson is director of University Hospital and the first Mississippian to be slated for the number one AHA post.

A native of Yazoo City, Dr. Wilson was graduated from the University of Mississippi and received his M.D. degree from Emory. He earned the M.P.H. from Yale and



*Dr. Wilson*

received his postgraduate hospital training in New York.

He is a colonel in the Mississippi National Guard and commander of the 134th Surgical Hospital Group. In 1951, he was appointed director of the University Hospital before construction was begun, and he assisted with the planning and development of the huge physical plant in the medical center. With the latest addition, now under construction, the hospital will have 460 beds.

Active in the Mississippi Hospital Association as well as at the national level, Dr. Wilson has

served as a member of the Board of Governors and as president.

In AHA, he has been a member of various national committees and has served as chairman of the Council on Government Relations. In the latter capacity, he has represented AHA in testimony before committees of the Congress.

Last year, Dr. Wilson was elected a member of the AHA Board of Trustees. At the recent 1966 annual convention, he was named president-elect by the House of Delegates. He will be inaugurated president of the national body at the 1967 convention.

### Washington Firm Gets Smoking-Health Contract

A \$96,000 contract for the collection and organization of information sources for federal and state anti-smoking campaigns has been awarded to Herner and Company. Under this contract, awarded by the U. S. Public Health Service, the Washington-based information systems development firm is analyzing and collecting materials published since 1963 dealing with all aspects of smoking and its effects on health.

Included in this project are the indexing, cataloging, and abstracting of 4,000 items presently on file with PHS' National Clearinghouse for Smoking and Health. Upon the completion of the project, the materials will be filed with the National Clearinghouse and serve as a basic source of information on the relationship of smoking and health.

### Dr. Roberts of UT Retires After 30 Years

Dr. Frank L. Roberts of Memphis retired as associate dean of the University of Tennessee College of Medicine Aug. 31 after 30 years of service in medical education. He came to Tennessee in 1924 in public health after being graduated from the University of Minnesota.

Dr. Roberts joined the UT medical faculty in 1937 and retired only because of the University's compulsory retirement at age 70 rule. He plans to continue his work in the Memphis and Shelby County Health Department as director of the venereal disease control program.

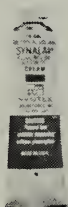


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## Central Inducts Three Into Fifty Year Club

Three Jackson physicians whose combined medical careers total 150 years were honored by the Central Medical Society when Drs. Peyton R. Greaves, H. C. Ricks, Sr., and Roland E. Toms were inducted into the Fifty Year Club during recent ceremonies.

Dr. Jim G. Hendrick of Jackson, president of the society, presented framed certificates and gold lapel pins to the honorees. Speaking for the membership of Central, Dr. Hendrick said that "these physicians exemplify American medicine's spirit of service and dedication through long and useful careers." He called attention to the fact that all three served as medical officers in World War I.

Dr. Greaves, a Mississippian, was graduated from Mississippi State University and received his M.D. from Jefferson Medical College at Philadelphia and his postgraduate training in New

York. For more than 40 years, he has been engaged in private practice in Jackson.

Dr. Ricks, a past president of the state medical association, received his medical degree from Emory University and his M.P.H. from Johns Hopkins University. After practicing in Oklahoma, he served as director of laboratories of the State Board of Health from 1928 until his retirement in 1962. He is professor emeritus of preventive medicine at the University Medical Center and was recently appointed a member of the State Board of Health by Governor Johnson.

Dr. Toms, a psychiatrist, is a medical graduate of Wayne University and received his postgraduate training at Columbia University. He has served as psychiatrist-in-chief of the Erle Johnson Sanatorium at Meridian and as associate professor of psychiatry at the University Medical Center. He is now on the professional staff of the Veterans Administration Center at Jackson.

With the induction of Drs. Greaves, Ricks, and Toms, there are now 83 living members of the Fifty Year Club who have rendered more than 4,000 years of medical service. Each of the new honorees is a member of the Central Medical Society, the Mississippi State Medical Association, and the American Medical Association.

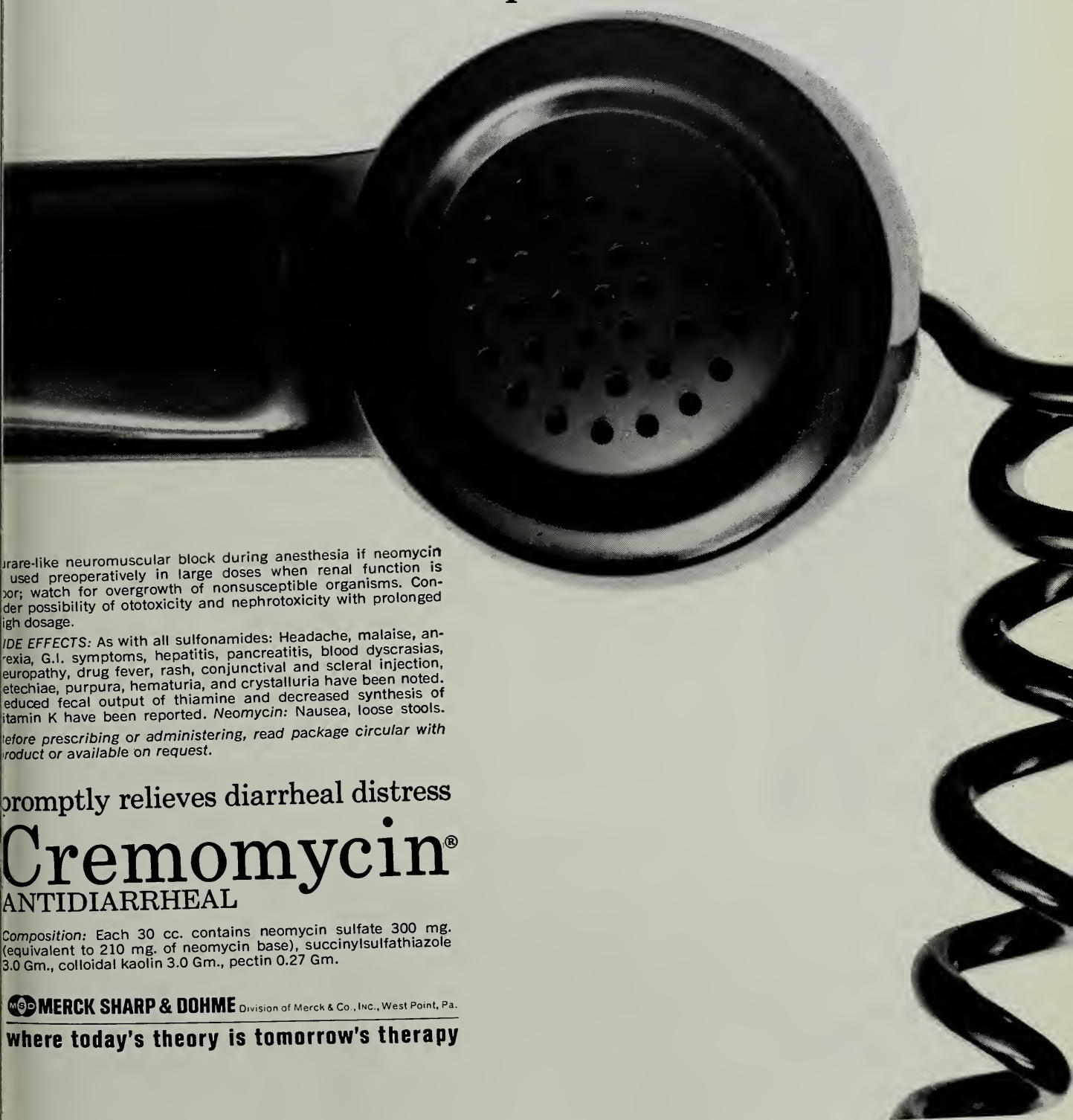


*Dr. Jim G. Hendrick, president of Central Medical Society, presents 50 Year Club certificates and pins to honorees, from the left, Drs. Roland E. Toms,*

*Peyton R. Greaves, and H. C. Ricks, Sr. Dr. John B. Howell, Jr., chairman of the Board of Trustees, represented MSMA at ceremonies.*



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## Vincristine Meet Is Set at St. Jude

A vincristine symposium which will consider current concepts of biological, pharmacological, and biochemical actions together with comprehensive summaries of therapeutic results obtained in treatment of solid tumors and the leukemias will be sponsored at St. Jude Children's Research Hospital in Memphis on Jan. 27, 1967. Organizing the symposium is the pediatric division of the Southwest Cancer Chemotherapy Study Group.

Dr. Grant Taylor of Houston, Texas, chairman of the group, said that no registration fee will be charged and that all interested Mississippi physicians will be welcome.

## Dr. Hicks Is Named to Board of Health

Dr. G. Swink Hicks of Natchez has been appointed a member of the Mississippi State Board of Health by Governor Johnson. He was nominated for the post by the state medical association and will serve until 1972.



*Dr. Hicks*

The veteran medical leader is a past president of the Mississippi State Medical Association, serving during the 1960-61 year. He is now serving his fourth year on the Board of Trustees, the nine member governing body of the association.

Dr. Hicks is the incumbent president of the Mid-South Postgraduate Medical Assembly, the tri-state scientific organization of physicians from Arkansas, Mississippi, and Tennessee. In 1965, he was elected chief of staff of the Jefferson Davis Memorial Hospital at Natchez. He is also a member of the board of directors of the Mississippi Hospital and Medical Service, the Blue Cross-Blue Shield plan.

The new appointee received both his premedical and medical training at the University of

Tennessee and his postgraduate training in surgery in Memphis, New York, and Stamford, Conn. He is a fellow of the American College of Surgeons, and he served as an Air Force medical officer during World War II, attaining the grade of major.

Active in medical organization, Dr. Hicks has served as president of the Homochitto Valley Medical Society, his local component group, as vice president of the state medical association, as a member and chairman of a number of committees, and as president six years ago. He was appointed to the Board of Trustees to serve the unexpired term of Dr. Everett Crawford of Tyler-town and elected for a full term at the 98th Annual Session. He has served as a Blue Cross-Blue Shield director since 1956.

## Fall Circuit Courses Begin Oct. 18

The University of Mississippi Medical Center will continue to bring postgraduate education to physicians throughout the state as Circuit Courses get under way this fall.

Circuit course lecturers from UMC will travel to Natchez on Oct. 18 to speak on hypertension. Dr. Jose Montalvo, assistant professor in pediatrics, will discuss hypertension in children and Dr. Herbert G. Langford, professor of medicine, will speak on hypertension in adults.

Additional circuit course lecturers will go to Tupelo Oct. 26 and to Greenwood Oct. 27 to talk on chemotherapy for malignancy. Dr. Robert B. Thompson, assistant professor of clinical laboratory sciences, will discuss medical aspects; Dr. Edward M. Lowicki, assistant professor of surgery, will discuss surgical considerations.

The second sessions will be held Nov. 2 in Tupelo and Nov. 3 in Greenwood. Topic of the circuit course lectures will be renal transplantation. Lecturers will be Dr. Hilary Timmis, assistant professor of surgery, who will speak on surgical experiences, and Dr. John Bower, instructor in medicine, whose subject is preoperative management.

Sessions number three will be held Nov. 9 in Tupelo and Nov. 10 in Greenwood at which times the lectures will deal with acute abdominal surgical emergencies in infants. Dr. Blair Batson, pediatrics department chairman, will discuss diagnosis and preoperative preparation; Dr. Raymond Martin, clinical assistant professor of surgery, will speak on surgical management.



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Hill Crest is fully accredited by the Joint Commission on Accreditation of Hospitals.

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## MEETINGS

### NATIONAL AND REGIONAL

American Medical Association, Clinical Convention, Nov. 28-Dec. 1, 1966, Las Vegas. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago, Ill. 60610.

American Academy of General Practice, Oct. 8-13, 1966, Boston. Mr. Mac F. Cahal, Executive Director, Volker Blvd. at Brookside, Kansas City, Mo. 64112.

International College of Surgeons, 15th Biennial Congress, Oct. 1-4, 1966, Mexico City, D. F., Mexico. Mr. Stanley Henwood, Executive Director, 1516 Lake Shore Drive, Chicago, Ill. 60610.

Southern Medical Association, Nov. 14-17, 1966, Washington. Mr. Robert F. Butts, Executive Director, 2601 Highland Ave., Birmingham, Ala. 35205.

### STATE AND LOCAL

Mississippi State Medical Association, May 15-18, 1967, Biloxi. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson.

Amite-Wilkinson Counties Medical Society, Third Monday March, June, September, December. S. E. Field, Jr., Centreville, Secretary.

Central Medical Society, First Tuesday, January, March, May, September, November, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. James R. Cavett, Jr., Suite B-6, Medical Arts Building, Jackson, Secretary.

Claiborne County Medical Society, First Monday January and July, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Port Gibson, Secretary.

Clarksdale and Six Counties Medical Society, Third Wednesday March and First Wednesday November, 2:00 p.m., Clarksdale. Robert L. Forman, Coahoma County Hospital, Clarksdale, Secretary.

Coast Counties Medical Society, First or Second Wednesday, January, March, May, September, and November. C. D. Taylor, Jr., 113 Davis Ave., Pass Christian, Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Secretary.

DeSoto County Medical Society, Second Thursday, January, April, July, and October, 1:00 p.m., Mary's Restaurant, Hernando. Malcolm D. Baxter, Jr., McIntosh-Baxter Clinic, Hernando, Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Secretary.

Homochitto Valley Medical Society, First Tuesday Quarterly, Jefferson Davis Memorial Hospital, Natchez. Walter T. Colbert, Jefferson Davis Memorial Hospital, Natchez, Secretary.

North Central District Medical Society, Third Wednesday March, June, September, and December. William E. Riecken, Jr., P. O. Box 831, Kosciusko, Secretary.

Northeast Mississippi Medical Society, Second Tuesday, March, June, September, and December, Corinth. S. Jay McDuffie, Nettleton, Secretary.

North Mississippi Medical Society, First Thursday, April and October, Oxford. M. Beckett Howorth, Jr., 2200 S. Lamar Blvd., Oxford, Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. Joseph C. Griffing, Lucius Olen Crosby Memorial Hospital, Picayune, Secretary.

Prairie Medical Society, Second Tuesday, March, June, September, December. J. M. Griffith, 824 Second Ave. North, Columbus, Secretary.

South Central Mississippi Medical Society, Second Tuesday March, June, September, and December. Julian T. Janes, Jr., 304 Clark, McComb, Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. John E. Green, Green Clinic, Hattiesburg, Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg. Patrick G. McLain, 1301 Washington St., Vicksburg, Secretary.



# Winthrop announces new

# WinGel<sup>®</sup>

ANTACID  
TABLETS  
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**For peptic ulcer,  
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Each WinGel tablet or teaspoon (5 ml.) contains 410 mg. of combined, highly reactive, short polymer, aluminum and magnesium hydroxides stabilized with hexitol.

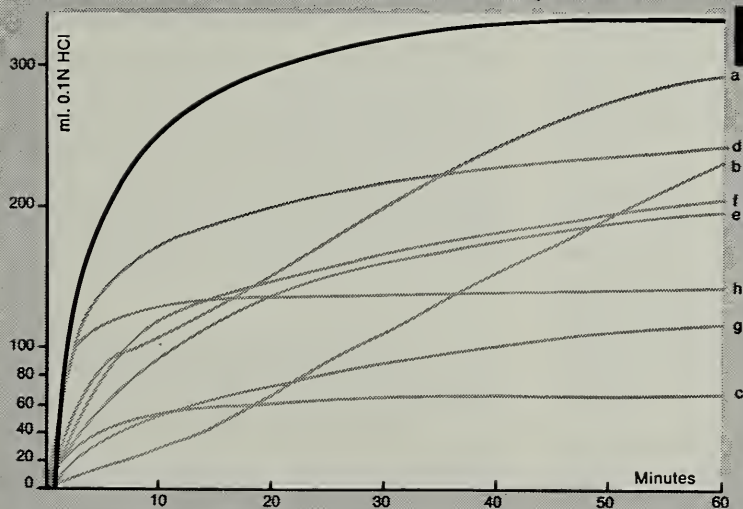
**Neutralizes 300 times its active-ingredient weight in gastric acid for fast, long-lasting relief**

Gastric or duodenal ulcer, acute or chronic gastritis, gastric hyperacidity...wherever there is "acid overflow" new WinGel can provide faster, longer, more complete neutralization.

In recent laboratory comparisons\* with eight other leading antacids, new WinGel tablets not only neutralized more hydrochloric acid per active-ingredient weight, but neutralized it faster and longer than all other antacids tested.

Pleasant pink in color, WinGel is delicately mint flavored with a smooth-as-cream texture—qualities sure to please the patient on long-term therapy. New WinGel is also specially formulated to avoid constipation or diarrhea.

**New WinGel neutralizes 300 times its active-ingredient weight in 0.1N hydrochloric acid—neutralizes more acid faster than other leading antacids**



Rate of 0.1N hydrochloric acid neutralization at pH 3.5 and 37° with WinGel and eight other leading antacid tablets—in vitro. Samples equaled the weight of tablet material containing 1.0 Gm. active ingredients.\*

\*Hinkel, E. T., Jr. (New York): Data in the files of the Department of Medical Research, Winthrop Laboratories.

**Dosage:** Peptic ulcer or gastritis—from 2 to 4 teaspoons of WinGel liquid or 2 to 4 tablets chewed or allowed to dissolve in the mouth every two to four hours. **Gastric hyperacidity**—2 tablets or teaspoons about ½ to one hour after meals as needed; children from 7 to 14 years of age, 1 or 2 tablets or 1 or 2 teaspoons of liquid as needed.

**How Supplied:** Liquid in bottles of 8 fl. oz. and 1 pint. Tablets in cellophane strips, boxes of 50 and 100. (One teaspoon of WinGel liquid is equivalent to one WinGel tablet in acid-combining capacity.) WinGel, trademark reg. U.S. Pat. Off.

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## Narcotics Registration Requirement Is Stressed

Underscoring requirements for election to or continuation of membership, the state medical association's Board of Trustees has called attention to the constitutional obligation of member physicians to possess a currently valid federal narcotics registration stamp. Exceptions are those in government service and those who need no stamp by reason of type of practice, employment, or retirement.

This was the statement of Dr. James L. Royals of Jackson, secretary-treasurer, who said that application forms for membership have been revised to reflect this requirement.

The special qualification was imposed by the House of Delegates in 1964 after the issue of the narcotics stamp had been studied by the Board of Trustees, Dr. Royals said.

The section of the By-Laws states that "no physician shall be eligible for election to or continuation of membership who does not possess a currently effective federal narcotics stamp, provided, however, that physicians in full time government service who need no registration to use, prescribe, and dispense narcotic drugs and those who, by reason of type of practice, employment, inactivity, or retirement, neither prescribe nor dispense narcotics and who for this reason alone have not applied for registration shall be exempt from this requirement."

Dr. Royals pointed out that many radiologists, pathologists, physicians in administrative medicine, and those in nonclinical endeavor may have no federal narcotics registration because of no need for it. Where such physicians have elected not to apply for registration, the requirement does not operate to affect their membership eligibility, he added.

On the other hand, physicians who have no stamp because of denial by licensure or government authorities or those who have voluntarily surrendered their narcotics registration as an alternative to forfeiture would come within the meaning of the requirement.

At least one hospital in the northern section of the state is known to have adopted the requirement as relates to staff membership, Dr. Royals said. The Board of Trustees viewed the action favorably when considering the issue at a recent meeting.

Candidates for election to membership must now include on their formal applications to component medical societies their federal narcotics registration number or the reason why they possess none. New forms for this purpose have been furnished to secretaries of component medical societies.

## New Members Bring UMC Faculty to 113

New members have been added to the University of Mississippi School of Medicine faculty this fall, bringing the number of full-time faculty to 113.

Named associate professors in the School of Medicine are Dr. Patrick H. Lehan, medicine; Dr. Tetsuzo Akutsu, surgery (research); and Dr. Hermann Bader, pharmacology.

Dr. Lehan, who comes from Seton Hall College, holds the M.D. degree from Georgetown University School of Medicine. Dr. Akutsu, former assistant professor of surgery at Downstate Medical Center in New York, received the M.D. degree from the University of Nagoya, Japan. Dr. Bader, who has been an assistant professor at Vanderbilt, received the M.D. degree from the University of Munich, Germany.

New assistant professor of neurosurgery (research) is Dr. Kentaro Koshino who holds M.D. and Ph.D. degrees from Japanese schools.

Two new faculty members at the instructor level are Dr. Hugh McLeod, Jr., radiology, who has the M.D. degree from the University of Tennessee, and Dr. Louis G. Navar, physiology and biophysics, who earned the Ph.D. degree from the University of Mississippi School of Medicine.

## Wholesale Drug Prices Decline Further in 1966

The Pharmaceutical Manufacturers Association disclosed today that the government's Wholesale Price Index for ethical drug preparations have dropped .3 per cent to a new record low of 93.8.

In other words, prescription ingredients sold by manufacturers for \$10 in January, 1961, when the index was begun, were available in 1966, for only \$9.38.

The data were reported to the association by the Bureau of Labor Statistics of the U. S. Department of Labor.



# YMCIN<sup>®</sup> 375

(tetracycline 250 mg.  
triacytyleandomycin 125 mg.)

**Indications:** Indicated in the therapy of acute severe infections caused by susceptible organisms and primarily by bacteria more sensitive to the combination than to either component alone. In any infection in which the patient can be expected to respond to a single antibiotic, the combination is not recommended. Signemycin should not be used where a bacteriologically more effective or less toxic agent is available. *Triacytyleandomycin, a constituent of Signemycin, has been associated with deleterious changes in liver function.* See precautions and adverse reactions.

**Contraindications:** Contraindicated in individuals who have shown hypersensitivity to any of its components. Not recommended for prophylaxis or in the management of infectious processes which may require more than 10 days of continuous therapy. If clinical judgement dictates therapy for longer periods, serial monitoring of liver function is recommended. Not recommended for subjects who have shown abnormal liver function tests, or hepatotoxic reactions to triacytyleandomycin.

**Precautions and Adverse Reactions:** *Triacytyleandomycin, administered to adults in daily oral doses of 1.0 gm. for 10 or more days, may produce hepatic dysfunction and jaundice. Adults requiring 3 gm. of Signemycin initially should have liver function followed carefully and the dosage should be reduced as promptly as possible to the usual recommended range of 1.0 to 2.0 gm. per day. Present clinical experience indicates that the observed changes in liver*

*function are reversible after discontinuation of the drug.*

Use with caution in lower than usual doses in cases with renal impairment to avoid accumulation of tetracycline and possible liver toxicity. If therapy is prolonged under such circumstances, tetracycline serum levels may be advisable. In long term therapy or with intensive treatment or in known or suspected renal dysfunction, periodic laboratory evaluation of the hematopoietic, renal and hepatic systems should be done. Formation of an apparently harmless calcium complex with tetracycline in any bone forming tissue may occur. Use of tetracycline during tooth development (3rd trimester of pregnancy, infancy and early childhood) may cause discoloration of the teeth. Reversible increased intracranial pressure due to an unknown mechanism has been observed occasionally in infants receiving tetracycline. Glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and definite allergic reactions occur rarely. Severe anaphylactoid reactions have been reported as due to triacytyleandomycin. Photosensitivity and photoallergic reactions (due to the tetracycline) occur rarely. Medication should be discontinued when evidence of significant adverse side effects or reaction is present. Patients should be carefully observed for evidence of overgrowth of nonsusceptible organisms including fungi, which occurs occasionally, and which indicates this drug should be discontinued and appropriate therapy instituted. Steps should be taken to avoid masking syphilis when treating gonorrhea.



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## Family Doctor Is Named to New Federal Medical Post

An Indiana family doctor who is vice president of the American Academy of General Practice has been appointed to a new federal medical post concerned with expediting Medicare's Title XIX, according to a report from the Department of Health, Education, and Welfare.

Dr. Francis L. Land, of Fort Wayne, assumed his duties in September as medical consultant to the Commissioner of Welfare. His assignment encompasses the medical aspects of Title XIX, which provides medical and dental assistance for indigent persons under 65 and children. He has retired from his practice.

Dr. Land was elected vice president of the Academy in 1965. He served on the AAGP Board of Directors three years and was chairman of the Commission on Education. He was president of the Indiana Academy of General Practice in 1962, and president of the Allen County Medical Society, third largest in Indiana, in 1963-64. He served eight years as a delegate to the American Medical Association, and in 1963 was elected to the AMA's Council on Medical Education. In 1964 he was appointed consultant in general practice to the air force.

## Iowa Hospital Installs Color TV for Patients

One of the first all-color television systems ever installed in a hospital for patient enjoyment has been announced jointly by the Schoitz Memorial Hospital, Waterloo, Iowa, and the Radio Corporation of America.

The RCA Service Company will install 296 RCA Victor color TV receivers in the hospital, along with a master antenna and sound system, according to Roland B. Enos, hospital administrator.

"Television has played a most significant role in boosting patients' morale, and we wanted to offer the ultimate in televising comfort and convenience," he added.

Mr. Enos said RCA also will install nurse call equipment in the older section of the 428-bed general hospital.

The color television receivers will be equipped with remote control, permitting patients to adjust

the color, control volume, change channels and turn the set on and off without bothering busy staff members, he said.

In addition to watching television, he added, patients will be able to select four channels of programmed sound with the remote unit.

## New PKU Analyzer Is Announced

The Phoenix Precision Instrument Co. of Philadelphia, Pa. has announced a new microanalyzer for a fast and accurate ( $\pm 3$  per cent) quantitative and qualitative determination of tyrosine and phenylalanine in the diagnosis of phenylketonuria (PKU) in newborn babies.

The microanalyzer uses the column chromatography method employing the ion exchange technique which is the most specific and accurate of all methods for the quantitation of amino acids, according to the manufacturer. The scope of analyzer may also be utilized for the analysis of valine, alioisoleucine, isoleucine and leucine, for the detection of maple syrup urine disease, and homocystine and cystine in the diagnosis of homocystinuria and cystinuria as well as for many other ninhydrin positive compounds.

Literature and specifications on the PKU microanalyzer are available from Phoenix Precision Instrument Company, 3807 North 5th Street, Philadelphia, Pa. 19140.



*The Phoenix Precision PKU Microanalyzer utilizes the column chromatography method of ion exchange technique. The device is compact and adaptable to small clinical facilities.*



# Establish and maintain early, more decisive control of blood pressure

## DIUTENSEN-R®

Cryptenamine 1.0 mg.\* Methyclothiazide 2.5 mg. Reserpine 0.1 mg.

When blood pressure won't stay down despite initial therapy — when complaints of headache, fatigue or dizziness are often voiced — it may be time for a change to DIUTENSEN-R.

DIUTENSEN-R is thiazide and reserpine *plus* cryptenamine — a rational, comprehensive therapy to help establish and maintain early, more decisive control of blood pressure.

The cryptenamine in DIUTENSEN-R helps improve normal vasodilating reflexes while the thiazide and reserpine components maintain vasorelaxant, sedative, and saluretic benefits. Cryptenamine lowers pressoreceptor reflex thresholds (which may be abnormally high in hypertension) — “resets” pressoreceptors to function at more nearly normotensive levels.

*Early, more decisive control with DIUTENSEN-R helps secure continuing benefits — may reduce or even obviate the need for poorly tolerated drugs later in therapy.*

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“... quite apart from the problem of vascular damage, there arises a possibility of virtual ‘cure’ or remission of hypertension when treatment is early, i.e., before too many other secondary pressor systems have entered into the disequilibrium of pressor control, and when it is adequately suppressive.”

Corcoran, A. C.: The choice of drugs in the treatment of hypertension. In: *Drugs of Choice* 1966-67, W. Modell, Ed., St. Louis, C. V. Mosby Company, 1966, p. 417.

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**Indications:** DIUTENSEN-R may be employed in all grades of essential hypertension.

**Dosages:** Usual dose is 1 tablet twice daily, at morning and evening meals.

However, adjustment of dosage to suit individual circumstances may be required. Please refer to package insert for full particulars. **Side effects and**

**precautions:** The side effects observed with patients on DIUTENSEN-R have been of a mild and nonlimiting nature. These include occasional urinary frequency, nocturia, nasal congestion, muscle cramps, skin rash, joint pains due to gout symptoms and nausea and dizziness which have been reported for the individual components. Most of these symptoms disappear while the drug is continued at the same or lower dosage level. The concomitant use of digitalis and DIUTENSEN-R may increase the possibility of digitalis-like intoxication. If there is evidence of myocardial irritability (extrasystoles, bigeminy or AV block), dosage of DIUTENSEN-R should be reduced or discontinued. Nocturia in patients with marginal cardiac status and salt and fluid retention can be effectively controlled by limiting the time of administration to early afternoon.

DIUTENSEN-R should not be used in patients with a known intolerance to reserpine. Package inserts furnish a complete summary of recommended cautions related to each of the ingredients of DIUTENSEN-R.

\*As tannate salts equivalent to 130 Carotid Sinus Reflex Units.

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## UMC Accepts Biggest Frosh Class

The largest freshman class in the history of the University of Mississippi School of Medicine entered training last month, according to Dr. John A. Gronvall, acting dean. A total of 85 make up the class.

Entrants were selected competitively and come from 18 colleges and universities. Of the many Mississippi counties represented, Hinds tops the list with 17 students.

## Curriculum Changes Are Made at UMC

The University of Mississippi School of Medicine this fall will initiate curriculum changes recommended as the result of ongoing reevaluation begun four years ago.

Each of the five clinical departments will hold grand rounds at noon according to the following schedule: psychiatry, Monday; obstetrics-gynecology, Tuesday; pediatrics, Wednesday; surgery, Thursday; and medicine, Friday. Senior cross-block lecturers will be eliminated since faculty

believe regular attendance at grand rounds will provide essential clinical material in a more exciting format.

Future revisions in curriculum at the medical center will include a reduction of the amount of didactic time students spend in lectures, with accompanying flexibility in the center's educational program of electives. Improved integration of material between the basic science and clinical years will be a future goal of other curriculum changes.

## Nuclear Medicine Parley Is Slated in N. C.

The Southeastern Chapter of the Society of Nuclear Medicine will conduct its 1966 annual meeting Nov. 3-5 at Durham, N. C. All physicians interested in this field are cordially invited, according to Dr. C. Douglas Maynard of Winston-Salem, chairman of the scientific program committee.

Full details on the meeting, housing information, and programs may be obtained by writing Dr. Maynard at the N. C. Baptist Hospitals in Winston-Salem.

### SYMPOSIUM ON ADOLESCENCE

New Orleans, Louisiana

December 1-3, 1966

Approved for 15 hours credit by the American Academy of General Practice

Sponsored by the **DIVISION OF PSYCHIATRY** and **COMMUNITY MENTAL HEALTH CENTER OF TOURO INFIRMARY**. Supported by a National Institute of Mental Health Grant

#### GUEST LECTURERS INCLUDE:

Dana Farnsworth, M.D., Director of Student Health Services at Harvard University, Cambridge, Mass.

Irvin Kraft, M.D., Professor of Child Psychiatry at Baylor Medical School, Houston, Tex.

John Schimel, M.D., Associate Director of William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology, New York, N. Y.

George Tarjan, M.D., Professor of Psychiatry and Program Director of Mental Retardation Project at University of California in Los Angeles, Calif.

Carroll Witten, M.D., President-Elect of American Academy of General Practice, Louisville, Ky.

Howard Kern, M.D., Associate Professor of Clinical Psychiatry at Johns Hopkins University School of Medicine, Baltimore, Maryland

Symposium will be held at the Fontainebleau Motor Hotel, 4040 Tulane Ave.

Early hotel reservations are recommended.

#### AMONG TOPICS TO BE DISCUSSED:

"The Physician's Role in Mental Retardation"

"Parents of Problem Children"

"Handling of Adolescents by General Practitioners"

"Sexual Morality—A College Dilemma"

"Drugs in the Treatment of Children and Adolescents"

"Learning Problems of the Adolescent"

"Adolescence and Social Mores"

"Talking About Sex with Adolescents"

"Religious-Psychological Conflicts"

Gene L. Usdin, M.D.  
Director of Psychiatric Services  
Touro Infirmary  
1400 Foucher Street  
New Orleans, Louisiana 70115

Enclosed is my registration fee of \$20 for the SYMPOSIUM ON ADOLESCENCE to be given December 1-3, 1966 at the Fontainebleau Motor Hotel. (Checks should be made payable to Touro Infirmary.)

Name .....

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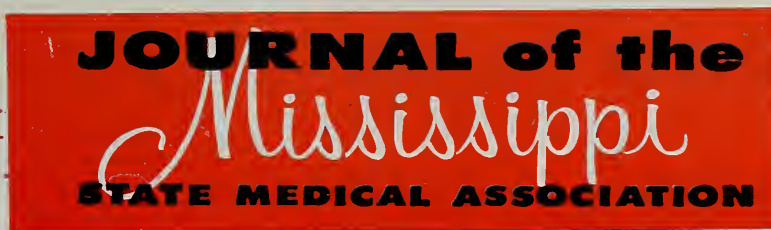
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Volume VII

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**How long will  
it take her  
to recover from  
her hip fracture  
if she just  
doesn't care?**





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**Warnings:** As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

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Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

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## Syntex Develops Steroid Metabolism Chart

The most comprehensive and organized presentation of the metabolism of steroid hormones is contained in a new, three-dimensional wall chart compiled by Dr. Ralph I. Dorfman, director of the Institute of Hormone Biology, and Dr. Dinesh C. Sharma, head of the Institute's Steroid Biochemistry Department.

The chart is being distributed by Holden-Day, Inc., of San Francisco. It will be also printed in Spanish and Japanese. Syntex has a copyright.

The five-by-three-foot, plastic, multicolored chart is designed to aid researchers, physicians, instructors and others in their investigations, clinical diagnoses and teaching curriculums.

The formulas and scientific names of more than 300 metabolites are given. A metabolite is any substance produced by the chemical processes occurring in the body. The compounds are derived from biosynthesis (constructive process) or catabolism (destructive process).

The sequence of biosynthetic reactions from the pregnenolone to progestational hormones, and to corticoids, androgens and estrogens are divided into six parts on the chart. The transformations from these six basic structures to other metabolites through either biosynthesis or catabolism are vividly illustrated by the three-dimensional effect. This is achieved by the use of vertical and horizontal flow pathways and 10 color patterns.

## Cryo-ophthalmology Society Sets First Session

The first annual clinical meeting of the Society for Cryo-Ophthalmology will be held in the Dunes Hotel, Las Vegas, Jan. 8-10, 1967.

Participants in the scientific sessions will include Drs. Charles Kelman, Harvey Lincoff, Michael Shea, Helen McPherson, David Sudarsky, Arthur Rinfret, Andrew de Roeth, and John Bel-lows. Luncheon speakers will be Dr. Jose I. Barraquer, of Bogota, Colombia; and Dr. B. Luyet, of Madison, Wisc.

The clinical aspects of cryo-ophthalmology will be stressed, including cataract, glaucoma, retinal detachment and herpetic keratitis.

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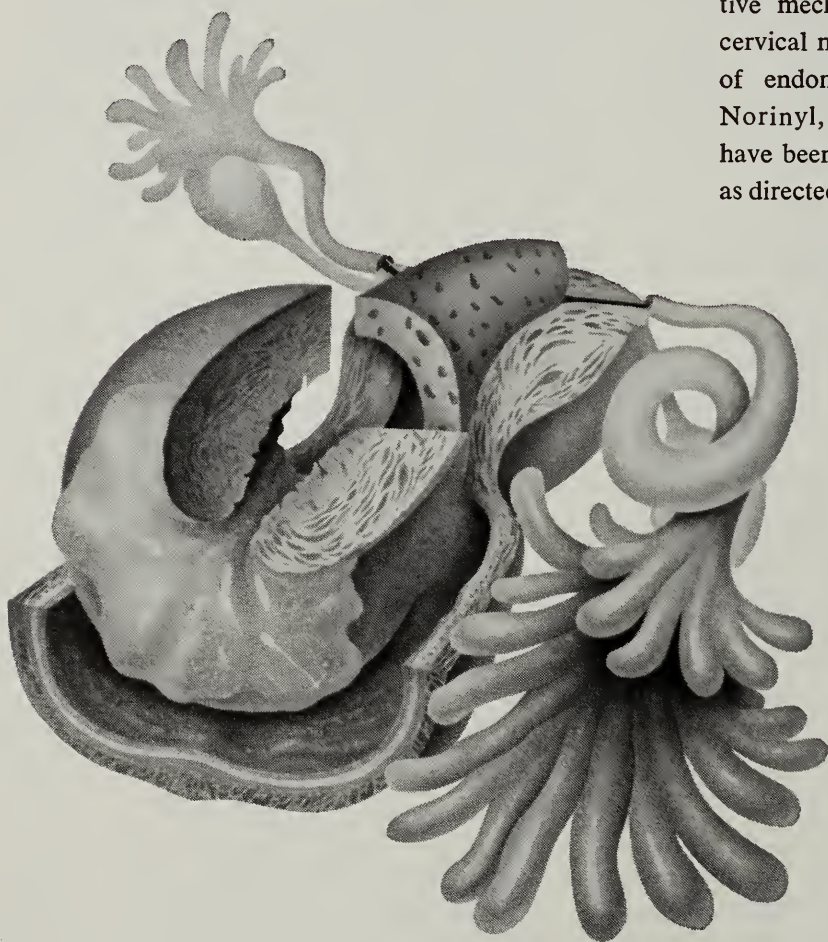
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# NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

November 1966

Dear Doctor:

The new Economic Opportunity Act Amendments of 1966 carry a \$100 million authorization for support of 50 neighborhood and area health centers. The poverty measure, H.R. 15111, will thus assure continuation of three centers already in operation at Boston, New York, and Denver.

The enactment also funds five new poverty program health centers which are not yet in operation. These will be in Watts (Los Angeles), the Bronx, two in Chicago, and one in Bolivar County, Mississippi. Program contemplates creation of 400 OEO health centers in the future.

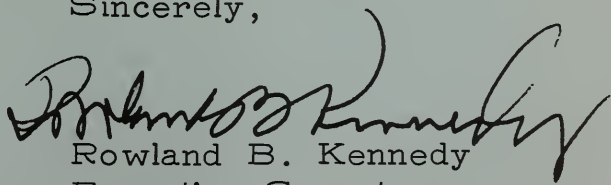
A voluntary agreement has been reached between the FDA and drug makers to limit candy-flavored children's aspirin to 25 tablets per package. A limit of 50 tablets, agreed to in 1955, has been honored by 95 per cent of manufacturers. Reduction was made because some authorities consider ingestion of 50 such tablets to be dangerous, even lethal, to most children.

By the end of the 1966-67 school year, 1,000 university and college students shall have committed suicide. This gloomy prediction has been concurred in by Dr. Eli Bower of the National Institutes of Health who agrees that 9,000 more students will have attempted self-destruction, and 90,000 others shall have threatened it. Reason advanced is "pressure cooker" environment of college campus.

Medicare has become a hemispheric proposition with payment authorized for Canadian and Mexican hospitals. Social Security Administration has agreed to pay institutions south of the border and in Canada if they are the nearest hospital to a U.S. over-65 beneficiary. Payment will be made on an emergency basis.

A rolling otological diagnostic clinic is in business in Kansas, going from school to school to test children's hearing. The special unit is manned by qualified staff and sponsored by Kansas State Health Department. Clinics are held only in cooperation with local physicians. Until program was begun, 40 per cent of children in state have never had a hearing test.

Sincerely,

  
Rowland B. Kennedy  
Executive Secretary



## DATELINE - MEDICAL AMERICA

### Lowly Loblolly May Be Rich Drug Source

University - Researchers at the Ole Miss School of Pharmacy are postulating that the loblolly pine may be a rich source of steroid drugs. Dr. Robert L. Settine has found that sap contains 90 per cent resin acids. If a feasible commercial conversion process can be developed for drug making from sap, the pulpwood industry in Mississippi would be revolutionized. Project was begun in 1960 as part of research to develop pharmaceutical products from native resources.

### Sen. Stennis Amends HEW Appropriations Bill

Washington - The Senate agreed to a hotly-debated amendment by Sen. John Stennis in passing H.R. 14745, the \$9.8 billion HEW appropriations bill. Section 207 prohibits use of funds to "impose or enforce any requirement" contrary to a patient's well-being as certified by the attending physician. This, apparently, modifies Civil Rights Act of 1964 and permits care on non-integrated basis if necessary for proper case management. If attending physician certifies such a need, and chief of staff concurs, HEW cannot prosecute the hospital for Civil Rights Act violation.

### We're The Best - And Still Dying By The Thousands

New York - United States motorists, even though slaughtered to the tune of nearly 50,000 annually, are still the safest in the world. The fatality rate per 100,000 vehicles in the U.S. is 52.6 as against 402.2 in Japan, 261.2 in Finland, 257 in Italy, and 242.9 in Austria. Only nation anywhere near to U.S. is New Zealand with a 53.8 rate. But lest Americans get complacent, fatality rate is steadily rising, up 20 per cent in five years.

### Five-A-Day Is Featured At Birmingham Center

Birmingham - Patients at the University of Alabama Hospitals and Clinics are getting five meals a day. Idea is to raise patient morale and to shorten space between meals. Schedule is 7 a.m., continental breakfast; 10:30, eggs and sausage brunch; 2:30 p.m. soup, sandwich, cold plate; 6:30, dinner - the works; and 9:00, bedtime snack of juice, milk, cheese, cookies. There is no truth to rumor that the program was copied from Bear Bryant's training table.

### New Law Sets Ambulance Services Standards

Albany, N.Y. - A new Empire State enactment permits Board of Health to set standards for ambulance services as to staffing, personnel training, and equipment. Because anybody in New York could previously buy a battered station wagon and get it licensed as an ambulance without so much as a bandaid for equipment, legislature acted to insure patient safety and service minimums.





ORIGINAL PAPERS

## Spontaneous Internal Biliary Fistulas

RUSH E. NETTERVILLE, M.D., and  
WILLIAM A. MIDDLETON, M.D.  
Jackson and Winona, Mississippi

SPONTANEOUS INTERNAL BILIARY fistulas are common enough to be encountered occasionally by most general surgeons. The incidence in relation to the total number of operations for biliary tract disease varies considerably among the series reported. A report from New York Hospital gave an incidence of 0.87 per cent;<sup>1</sup> Flowers and Fifth Avenue Hospitals 0.15 per cent<sup>2</sup> and Mayo Clinic 0.86 per cent.<sup>3</sup> Puestow<sup>4</sup> reports an incidence of 3 per cent. The average age of patients in the Lahey Clinic Series of 41 cases<sup>5</sup> was 56.9 years with the greatest incidence being in the sixth and seventh decades of life.

A majority of the internal biliary fistulas are of the cholecystoduodenal type.<sup>2, 8</sup> About 20 per cent of all enterobiliary fistulas are cholecystocolic.<sup>2, 8</sup> Cholecystogastric fistulas are found in 5 per cent of cases. Less common types are pleurobiliary and bronchobiliary and choledochoduodenal.<sup>6, 7</sup> Rare forms involve the kidney, pelvis, portal vein, ovarian cysts and the urinary bladder.<sup>4, 8</sup> The more common types of spontaneous biliary fistulas are illustrated in Figure 1.

About 90 per cent of all internal biliary fistulas are due to calculous biliary tract disease.<sup>2</sup> The second most common cause is peptic ulceration with erosion into the biliary tract.<sup>4, 6</sup> Pleurobiliary and bronchobiliary fistulas are often secondary to a subdiaphragmatic abscess complicating biliary tract disease but may be due to trauma<sup>5</sup> or to infestation by echinococcus or amoeba.<sup>2</sup>

The acutely inflamed gallbladder with or without stones in the cystic duct may become attached to a hollow viscus such as the duodenum, stomach, or colon. Eventually a communication is established at the point of adhesion usually as a result of repeated infection, ischemia of the wall and

---

*Spontaneous internal biliary fistulas are encountered in slightly less than 1 per cent of operations for biliary tract disease. Although they are usually secondary to calculous disease of the biliary tract, they may be secondary to peptic ulceration of the duodenum. They may also be caused by trauma and echinococcus and amoebic infestation. These fistulas may be enterobiliary, bronchobiliary or pleurobiliary. The authors discuss pathogenesis, symptoms and management and report three cases.*

---

stone erosion. This process may occur between the common duct and the duodenum as well. The inflamed gallbladder may perforate forming a subdiaphragmatic abscess which may then erode through the diaphragm into the free pleural cavity in the absence of pleural adhesions producing a pleurobiliary fistula or may erode into the right lung and communicate with a bronchus producing a bronchobiliary fistula.

A peptic ulceration of the duodenum may erode posteriorly into the common bile duct producing a choledochoduodenal fistula or an anterior ulcer of the duodenum may perforate into an adherent gallbladder producing a cholecystoduodenal fistula.

Penetrating and nonpenetrating wounds of the abdomen often involve the liver but these wounds seldom result in biliary fistulas.

The symptomatology is largely that of chronic cholecystitis and cholelithiasis and has usually persisted for several years before the diagnosis is made. Only three patients in the Lahey Clinic Series were asymptomatic before diagnosis. The most common symptom is pain coming on in moderate to severe attacks. Belching, flatulence, and nausea are common. Jaundice is noted in some cases. Chills and fever are occasionally experienced. There is a reported incidence of cholangitis in 11 per cent of the cases of cholecystoduodenal fistulas.<sup>8</sup> Cholecystocolic fistulas frequently have chills and fever associated with an ascending cholangitis. Jaundice may be present. Diarrhea is a common complaint. If the bile is shunted to the colon, a malabsorption syndrome may be noted.<sup>9</sup> Over half the patients will experience weight loss.

### ENTEROBILIARY FISTULAS

The presence of air or barium in the biliary tract indicates enterobiliary fistula except in rare cases where there is a widely patent sphincter of

Oddi or in cases of empyema of the gallbladder due to gas producing organisms. Roentgenographic studies after ingestion of a barium meal may reveal the fistula between the upper gastrointestinal tract and the gallbladder or common bile duct. The communication cannot always be demonstrated. In cases of cholecystocolic fistulas a barium enema may fill the gallbladder with barium demonstrating the fistulous communication (Figure 4).

### CASE NO. 1

This 61-year-old white male was first admitted to the Mississippi Baptist Hospital on Jan. 30, 1960, complaining of pain in the right upper quadrant of his abdomen associated with coughing up bile. He had become acutely ill on Nov. 1, 1959, with generalized abdominal pain associated with fever. This did not improve and he was hospitalized in his home town two days later. He ran a septic course with severe pain in his right subcostal region and right shoulder. He was semicomatose for several days. However, he gradually improved and was discharged three weeks after admission. The pain became worse again and he had to be hospitalized again six days later. On the second admission a diagnosis of right pleural effusion was made and a thoracentesis was performed. This was complicated by a pneumothorax. The lung gradually re-expanded, but he started coughing up purulent material. This decreased, and he was able to be discharged from the hospital the second time on Dec. 18. However, he remained weak and was unable to work. On Jan. 25 he

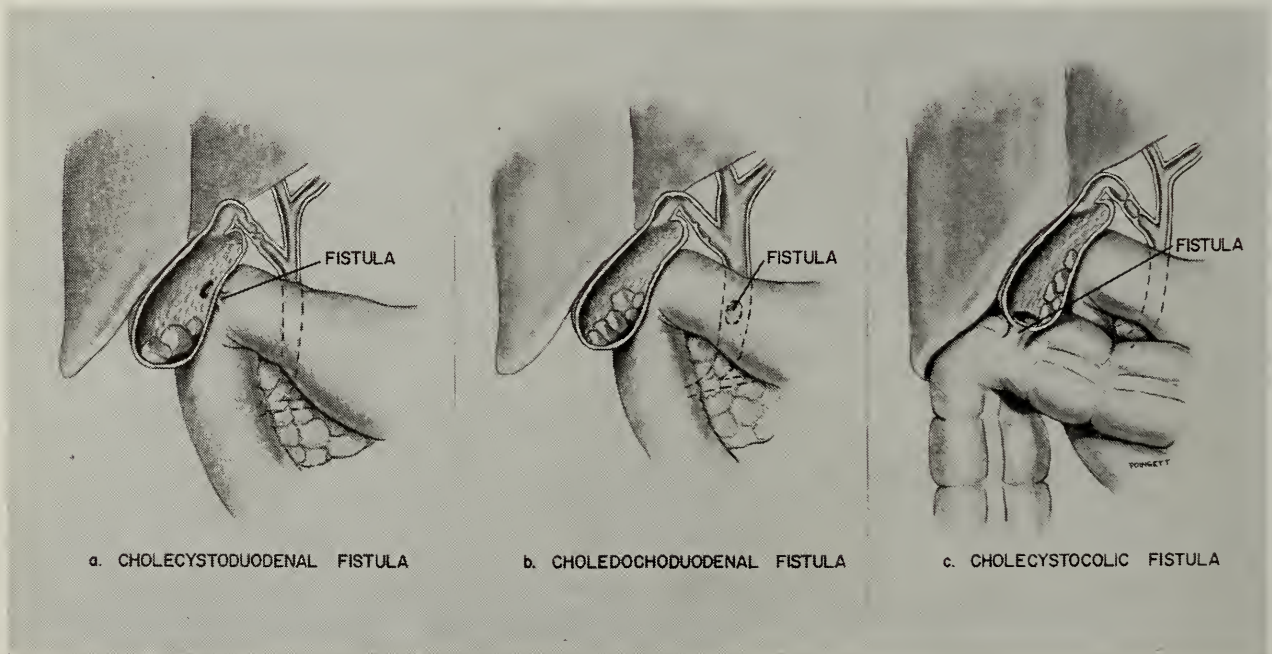


Figure 1. The more common type of biliary fistulas.



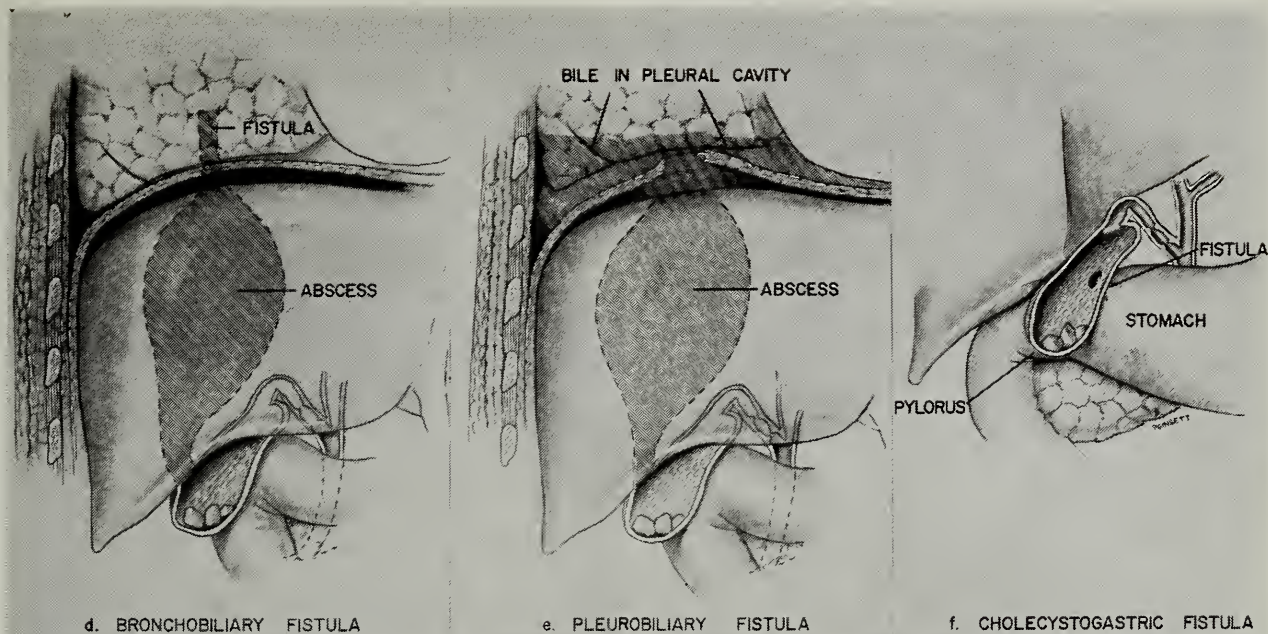


Figure 1 (con't). The more common types of biliary fistulas.

started coughing up bile. The cough was severe and interfered with his sleep. During the course of his illness he lost 24 pounds (168 to 144 pounds).

He gave a history of having had diabetes mellitus since 1953, but it had been controlled on a diabetic diet and 40 units of insulin daily.

Examination revealed a chronically ill man who had temperature 98 degrees Fahrenheit and blood pressure 144/80. The conjunctiva appeared slightly jaundiced. There was dullness to percussion below the right 4th rib anteriorly. There was slight tenderness in the right subcostal region. There were no masses and no rigidity.

### LABORATORY FINDINGS

The blood count revealed a hemoglobin of 13.0 gm. per cent, hematocrit 41 volumes per cent, white blood cell count 9,600 with 81 per cent segmented neutrophils, 1 per cent eosinophils, 17 per cent lymphocytes, and 4 per cent monocytes. Urinalysis was negative. The fasting blood sugar was 218 and serum bilirubin was 1.2 mg. per cent. An erect PA view of the chest was made on inspiration and expiration, and the right leaf of the diaphragm was elevated and fixed (Figure 2). A lateral view of the chest revealed marked elevation of diaphragm anteriorly (Figure 3).

On Jan. 31, 1960, a right subcostal incision was made under general anesthesia and an abscess cavity in the anterior subdiaphragmatic space was encountered. It communicated with the fundus of the gallbladder. The abscess cavity contained

about 100 cc. of pus and numerous gallstones. A culture of the abscess cavity failed to grow out pathogens. Multiple Penrose drains were left in place, and the wound was closed about the drains.

The patient had a smooth postoperative course and was afebrile after the second postoperative day. He stopped coughing up bile almost immediately after surgery and his cough had completely subsided by the fifth postoperative day. There was profuse purulent drainage from the wound, but he was able to be discharged from the hospital on the 11th postoperative day.

He was re-admitted March 1, 1960, and the following day a cholecystectomy and exploration of the common bile duct was done. The gallbladder was filled with small stones, but there were no stones in the common bile duct. It was drained with a T-tube.

Following surgery he had an afebrile course; the T-tube cholangiogram was normal, and he was discharged from the hospital on the 10th postoperative day. He was last seen about four years after surgery for another complaint, and he had no more trouble referable to his biliary system.

This fistula was an indirect communication between the gallbladder and the bronchus by way of the subdiaphragmatic abscess. Drainage of the abscess permitted the fistula to close before the gallbladder was removed.

### CASE NO. 2

This 72-year-old white female was admitted to the Tyler Holmes General Hospital on August 12,



1962. She had become ill three days previously with nausea, vomiting and right upper quadrant pain and diarrhea. She stated that she had had these attacks for 12 years. She had vomited up a gallstone the day before admission, and it was brought to the hospital. It measured 8 x 9 mm. in size.

She had had chronic auricular fibrillation for many years with a slow rate of 68-72 beats per minute. She had a moderate to severe hypertension which at the time of hospital admission was being treated with one Hydropres 50K tablet daily.

### INITIAL HOSPITAL TREATMENT

On admission she was digitalized, given intravenous fluids, and placed on antibiotics. Her admission WBC was 9,950 with a slight shift to the left. Her hemoglobin was 15.4 gm. per cent. Urinalysis was negative except for occasional granular and hyaline casts. The BUN on admission was 24.1 mg. per cent and remained at this level until five days postoperatively when it was 9.7 mg. per cent. The serum amylase was normal, but the serum bilirubin was slightly elevated.

She remained afebrile but developed more abdominal distension and more generalized abdom-

inal tenderness. Gastric suction did not give any relief. On the fourth day of hospitalization a flat and upright film of the abdomen revealed for the first time distended loops of small bowel with fluid levels characteristic of a mechanical obstruction.

Laparotomy was done under general anesthesia on the fourth hospital day. All of the small bowel

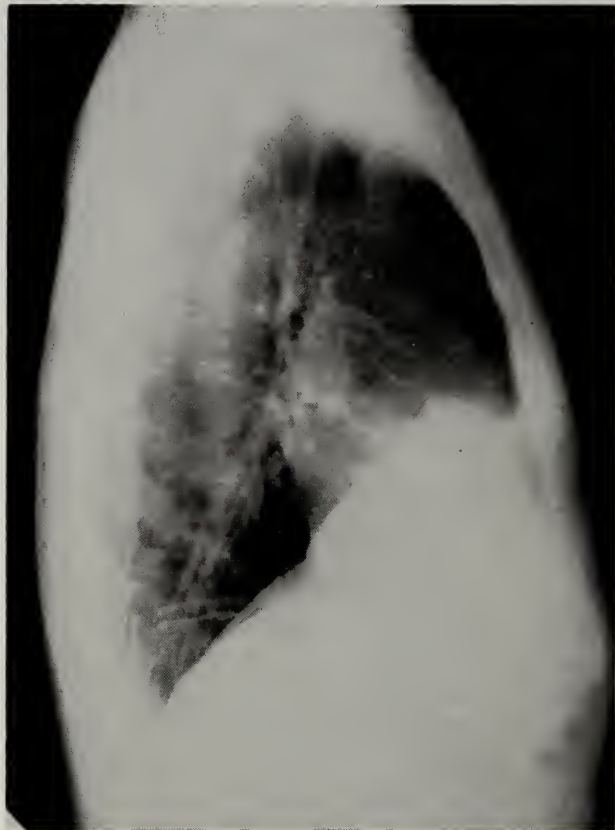


Figure 3. Lateral view of the chest in Case 1 demonstrating the elevation of the diaphragm to be anteriorly.

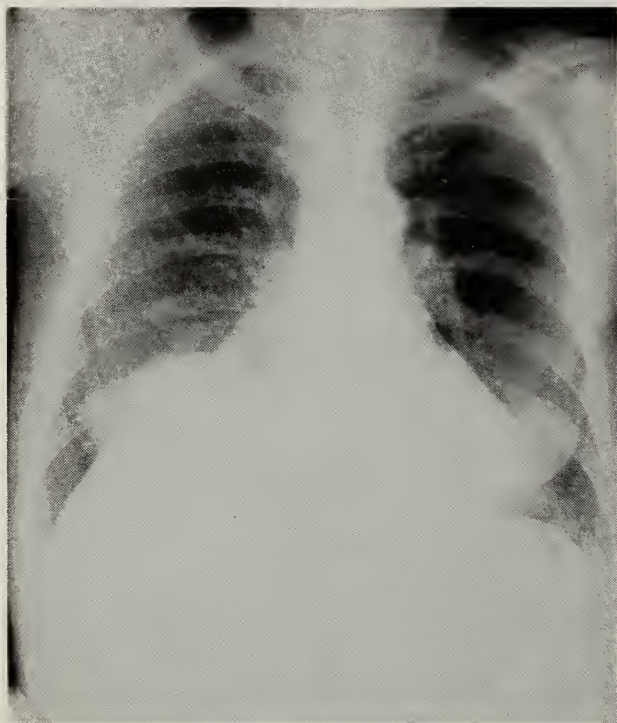


Figure 2. An erect PA view of the chest in Case 1 revealing an elevation of the right leaf of the diaphragm.

was markedly distended with about 200 cc. of serous fluid in the abdominal cavity. The site of obstruction was at the ileocecal valve and was due to a gallstone 2 cm. in diameter being lodged at that point. This stone could be pushed through the ileocecal valve without difficulty and without trauma to the bowel. It was then milked through the colon into the rectum. The gallbladder was found to be contracted down over a number of stones about 1 cm. in diameter. The gallbladder was adherent to the duodenum with a fistulous communication.

### POSTOPERATIVE COURSE

She had a smooth postoperative course except for a catchy chest pain on the eighth postoperative day associated with tenderness in the calf of her



left leg. A chest x-ray revealed findings suggestive of a pulmonary embolus. This condition responded to conservative therapy. She has not had further trouble.

A cholecystectomy has not been performed on this patient because of her age and poor cardiac condition which render her a bad surgical risk. If the general condition of the patient permits, the biliary tract disease should be treated at a second operation and the fistula closed. The authors prefer to relieve the obstruction at the first operation and remove the gallbladder and close the fistulous tract at the second operation. However, Berliner and Burson have prepared some of these cases with a long tube before surgery and have performed a one stage repair. The incidence of recurrence in gallstone ileus has been reported as varying from 5 per cent to 9 per cent.<sup>10</sup> The incidence of symptoms from chronic cholelithiasis is much higher than this. However, in a poor risk patient such as this, cholecystectomy was not considered advisable.

### CASE NO. 3

A 63-year-old white female was admitted to the University Hospital, Jackson, Miss., Sept. 19, 1965, stating that she was well until about two months before admission. At that time she developed intermittent attacks of right upper quadrant colicky abdominal pains, fever, and diarrhea. After two weeks she consulted her family physician (W.A.M.) and was admitted to the Tyler Holmes General Hospital. The following diagnosis was made: acute and chronic cholecystitis, pyelonephritis, and iron deficiency anemia. She was treated with Chloromycetin and Polycillin but continued to spike a daily temperature of 101 degrees Fahrenheit to 104 degrees Fahrenheit, and the diarrhea persisted. A barium enema revealed a cholecystocolic fistula with the gallbladder filled with stones (Figure 4). She was transferred to the University Hospital.

On admission her temperature was 104 degrees Fahrenheit, pulse 110 per minute, respiratory rate 30 per minute, and blood pressure was 140/80 mm. Hg. She was well-developed and well-nourished and did not appear to be in acute pain at the time of examination. There was no evidence of jaundice. Tenderness was elicited in the right upper quadrant of the abdomen, but there was no rigidity and no palpable masses. The liver, spleen, and kidneys were not palpable.

A blood count on admission revealed: hemoglobin 10.9 gm. per 100 cc., hematocrit 34 volumes per cent, total white cell count was 16,200 with 2,592 lymphocytes, 12,150 segmented neutrophils, and 1,458 bands. A voided urine re-

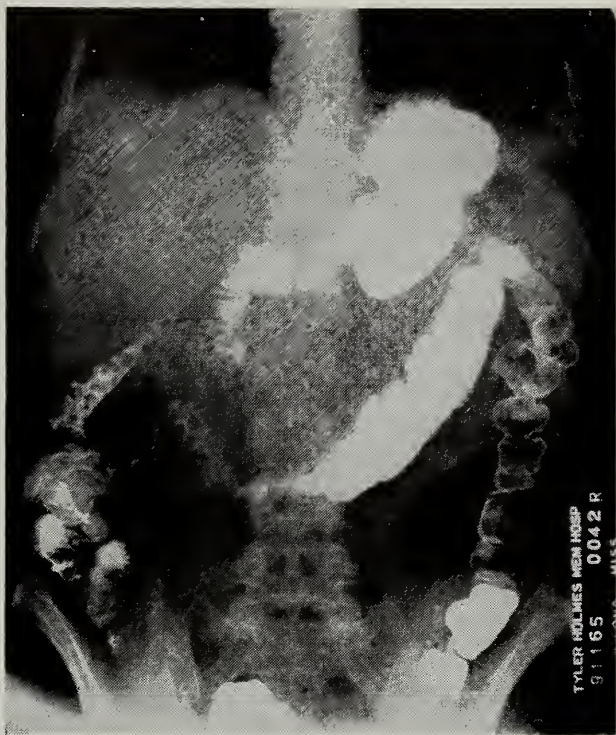


Figure 4. Barium enema in Case 3 revealing a communication between the hepatic flexure of the colon and the gallbladder. The gallbladder is filled with stones.

vealed yellow color, ph. 5.0, specific gravity 1.010, protein 2 plus, glucose negative, white blood cells 5-10 per high power field, red blood cells 5-10 per high power field. Blood urea nitrogen was 14 mg. per cent, chlorides 92 mEq., CO<sub>2</sub> combining power 32 mEq., glucose 91 mg. per cent, potassium 3.1 mEq., and sodium 140 mEq. The prothrombin time was 17.8 seconds with a control of 15.3 seconds or 39 per cent of normal. This could be corrected to normal using 10 per cent normal serum. The serum bilirubin was 0.3 mg. per cent.

She was given multiple transfusions and intravenous tetracycline. Laxatives, Sulfathalidine, and kanamycin were given to sterily prepare the colon.

### EXPLORATION OF ABDOMEN

On Sept. 23, the abdomen was explored using a right subcostal incision and the gallbladder was found to be filled with small faceted stones and located deep in a fissure on the inferior surface of the liver. The fundus of the gallbladder communicated with the hepatic flexure of the colon by a well-formed fistula about 5 mm. in diameter. The common bile duct did not appear enlarged and on exploration did not contain stones. The gallbladder was very vascular and bled much more than usual during dissection. The color and ap-

pearance of the liver was normal. The stomach, duodenum, pancreas, and small bowel were normal. The gallbladder was removed with some difficulty because of the marked vascularity of the acutely and chronically inflamed tissue. After the gallbladder was removed from its bed, the fistula was easily closed. The common duct was drained with a T-tube and Penrose drains were left in the gallbladder bed and brought out a stab wound.

Postoperatively, the patient was placed on Terramycin intravenously, intravenous fluids, procaine penicillin, and streptomycin intramuscularly. Gastric suction was used for two days. She was afebrile after the third postoperative day. There was some drainage from the drain site until Oct. 12. The Penrose drains were removed two days later. A T-tube cholangiogram was done and found to be normal. She was discharged on Oct. 15. She was last seen in the office on Nov. 29 and was doing well. Her appetite was good, and she had gained six pounds.

### SUMMARY

Spontaneous internal biliary fistulas are encountered in slightly less than 1 per cent of operations for biliary tract disease. These are usually secondary to calculous disease of the biliary tract but may be secondary to peptic ulceration of the

duodenum. Less common causes are trauma and echinococcus and amoebic infestation. These fistulas may be enterobiliary, bronchobiliary or pleurobiliary. The primary treatment is directed toward the biliary tract disease with closure of any direct communication between the biliary tract and another hollow viscus. ★★★

514-A East Woodrow Wilson Drive (39213)

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### SAFETY FIRST

Observes the safety expert: If St. Christopher had owned an automobile, it is probable that he would have carried a Ralph Nader medal.



# Some Currently Important Aspects Of Rheumatoid Arthritis

ALFRED JAY BOLLET, M.D.

Augusta, Georgia

IN RECENT YEARS the greatest interest in the pathogenesis of rheumatoid arthritis has centered on immunologic phenomena. A great deal has been learned, and evidence for important immune reactions occurring in the lesions of rheumatoid arthritis has been obtained. Immunologic phenomena do not, however, seem to be the initiating mechanism in the production of this disease. Epidemiologic evidence has brought a return of interest in the possibility that an infectious agent may initiate rheumatoid arthritis. This paper is an attempt to review the basic immune phenomena which occur in rheumatoid arthritis, the evidence for a lesion occurring in affected tissues, the direction of investigation of possible infectious agents and certain therapeutic implications of these new insights.

The most significant immune phenomenon in rheumatoid arthritis, because of its diagnostic value and its potential pathogenetic significance, is the rheumatoid factor. The rheumatoid factor, from a molecular viewpoint, is a macroglobulin, one of the high molecular weight globulins which are now called the gamma M or IGm globulins. This very large molecule is an antibody which reacts with other gamma globulins, the smaller 7-S or gamma G globulins. Complexes of macroglobulin rheumatoid factor and the patient's own gamma globulin sometimes form *in vivo*, and can be observed circulating by appropriate analysis of the serum in the ultracentrifuge. In addition a large number of *in vitro* reactions between rheumatoid factor and various gamma globulins have

been studied. Partial denaturation of gamma globulin, by heating or by reaction in an antigen-antibody complex, augments its ability to react with rheumatoid factor, and thus "altered" gamma globulin can be considered the antigen to which rheumatoid factor is the antibody.

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*Epidemiologic evidence has brought a return of interest in the possibility that an infectious agent may initiate rheumatoid arthritis. The author reviews the basic immune phenomena which occur in rheumatoid arthritis, the evidence for a lesion occurring in affected tissues, the direction of investigation of possible infectious agents and certain therapeutic implications of these new insights.*

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A variety of indicator systems have been employed in the assay of rheumatoid factor to demonstrate the occurrence of a reaction with its antigen; agglutination or flocculation tests lead the list in frequency of use. Sheep blood cells coated with rabbit anti-sheep cell antibody (rabbit gamma globulin) constitute the classic reagent used to demonstrate the reaction of rheumatoid factor with gamma globulin, the so-called "sheep cell agglutination test"; in practice this has been generally replaced by a much simpler procedure using inert carrier particles. These are the same kind of particles used in latex base house paints. On a slide or in a test tube these particles are useful, since they not only bind pigment (when used in paint) but can also bind proteins (when used in a test tube).

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From the Department of Medicine, Medical College of Georgia.

Read before the General Scientific Session, 98th Annual Session, Mississippi State Medical Association, Jackson, May 11, 1966.

## RHEUMATOID ARTHRITIS / Bollet

Gamma globulin adheres to the latex particles; human gamma globulin (Fraction II) is used in the usual procedure. A reaction with the rheumatoid factor results in clumping of the particles; this is the latex flocculation test. The most widely used version of this test is a simple slide agglutination kit (marketed by Hyland Laboratories, Los Angeles, Calif.). In this procedure one drop of serum is diluted with 20 drops of buffer; one drop of the diluted serum is then put on a slide with one drop of the latex coated with gamma globulin, as provided. In one minute grossly visible agglutination can be seen. This is a simple, useful test for rheumatoid factor which can be done in any office or laboratory.

The rheumatoid factor can be found in the serum in approximately 80 per cent of patients with rheumatoid arthritis; it can be found in the synovial fluid in some patients in whom it is not demonstrable in the serum, and it has recently been found in white cells in the synovial fluid, apparently as a result of phagocytosis.

### IMMUNE REACTION

Now let us turn to the question whether an immune reaction is occurring *in vivo* in patients with rheumatoid arthritis. The appearance of plasma cells in synovial tissue of affected joints is one type of evidence for an immune reaction *in vivo*. The cytoplasm of these plasma cells has been shown to contain rheumatoid factor.<sup>1</sup> These antibody producing cells, located at the site of the disease, are an important consideration from a theoretical standpoint, since antibody producing cells tend to gather around the site of an antigenic stimulus. Thus one is led to suggest that the antigen responsible for the production of rheumatoid factor is present in rheumatoid synovial tissue. The rheumatoid factor is demonstrable in the synovial fluid in some instances before it is demonstrable in the blood, providing further support to the concept that there is local synthesis of the rheumatoid factor in the joint lesions.

The observation that rheumatoid factor is found in phagocytic cells (leukocytes) in synovial fluid<sup>2</sup> is further evidence for a local reaction involving rheumatoid factor, apparently the result of phagocytosis of insoluble immune precipitates in the synovial tissue. The phagocytized particles have been shown to contain rheumatoid factor and its antigen, gamma globulin or altered gamma globulin. Thus we can conclude that rheumatoid factor is not only being produced in the lesions as

a result of a local antigenic stimulus, but also that a reaction between the rheumatoid factor and its antigen has occurred in the tissues affected by the disease. This is further reason, then, to suspect that the immune phenomena are important in the pathogenesis of at least some aspects of the pathology of rheumatoid arthritis.

### SERUM COMPLEMENT LEVEL

An additional important observation is the low level of complement in the synovial fluid in rheumatoid arthritis.<sup>3</sup> This is most intriguing because the serum complement level is not abnormal in rheumatoid arthritis. Serum complement is depressed in systemic lupus, and this is one of the reasons for suspecting that important immune phenomena are occurring in this disease. In rheumatoid arthritis, however, the serum complement level is usually elevated when there is active inflammation, since the complement level increases nonspecifically in a variety of illnesses, behaving like an "acute phase reactant." The observation that complement is low in the synovial fluid is thus particularly interesting, providing further evidence that a local immune process has occurred in the joints affected by the rheumatoid process.

These observations, then, add up to a considerable amount of evidence that the antibody found in the serum of patients with rheumatoid arthritis is not just a side effect or insignificant manifestation of the disease, but actually is part of an immune process which is occurring in the lesions of the disease.

What is responsible for this immune process in the affected tissues? We know that rheumatoid factor reacts with gamma globulin which has been modified in some way. One of the classic ways of modifying gamma globulin to make it reactive *in vitro* is to react it with an antigen. It is reasonable to suspect, therefore, that the mechanism by which gamma globulin becomes an antigen which stimulates the local production of antibody (rheumatoid factor) is a previous reaction with an antigen in the lesions.

### ANTIGEN-ANTIBODY REACTION

Perhaps it is a previous antigen-antibody reaction occurring in the tissues in rheumatoid arthritis, making gamma globulin antigenic and stimulating the localization of plasma cells in the lesions and production of rheumatoid factor by these plasma cells. The antigen must be there, the antigen is gamma globulin, and something has made that globulin antigenic; these facts all increase the



suspicion that there has been a previous immune reaction.

Another reason for suspecting that there is another immune reaction occurring in the lesions of rheumatoid arthritis is the low level of synovial fluid complement. Complement actually is antagonistic to rheumatoid factor in the sense that they compete with each other for either the same or similar binding sites on antigen-antibody complexes. One would not expect, therefore, that complement would be bound in a reaction involving rheumatoid factor. The low synovial fluid complement level in rheumatoid arthritis is further evidence, then, for an immune phenomenon occurring in these joints which does not involve rheumatoid factor. It is possible that the immune reaction which is binding complement is also stimulating the production of rheumatoid factor by making the antibody gamma globulin into the antigenic stimulus to rheumatoid factor production.

## IMMUNE PHENOMENON QUESTION

Now the question becomes, what could this primary or at least antecedent immune phenomenon be? This is the most important question at the moment, and although there is no definitive answer, I hope I have at least provided evidence for the importance of the question. This approach to the etiology of rheumatoid arthritis brings up the earlier etiologic concept of an infectious basis for this disease. Such an approach went out of style with the advent of auto-immunity as the explanation of all diseases of unknown or unclear etiology. It has come back, however, with disillusionment concerning the pathogenetic significance of auto-antibodies. The observations of the clustering of cases of rheumatoid arthritis in certain families and populations has suggested a role of an environmental factor, rather than a genetic basis in the pathogenesis of the disease. For example, we find spouses are affected with even greater frequency than blood relatives of patients with rheumatoid arthritis.

Of the possible organisms responsible for an infectious etiology of rheumatoid arthritis, the agents most frequently considered recently are the mycoplasma or PPLO organisms and viruses. Of course, one reason for suggesting these agents is that they are the hardest to culture, and one can most easily explain away the failure to find any of them thus far. There have been reports of mycoplasma from patients with rheumatoid arthritis, but the experts in the field discount them as contaminants of the tissue cultures used in isolation.

Significant isolation of organisms may be just over the horizon, perhaps awaiting better cultural techniques or further developments in the knowledge of the biology of this group of organisms, which have only recently come under intensive study.

## INFECTIONS

In this regard, however, it is entirely possible that infectious agents are not going to be found at all times in patients with rheumatoid arthritis; they may only be demonstrable at certain stages in the disease. There are similar, analogous problems in other infections. Tumor viruses, for example, can often be cultured only shortly after infection; later on the tumor progresses but the virus is no longer demonstrable. If a similar phenomenon occurs in rheumatoid arthritis, the problem of culturing the organism becomes extremely difficult. But, with tumor virus in particular, it is possible to demonstrate viral antigen in the lesions when the virus can no longer be cultured.<sup>4</sup>

To summarize these thoughts, then, the primary immune phenomenon occurring in rheumatoid arthritis, which seems to be antecedent to the development of rheumatoid factor, may represent antibody production to an antigen which came from or was produced by an infectious agent. At any rate, this seems to be the main direction of current investigation of the etiology of this disease.

Regardless of the pathogenetic significance of rheumatoid factor, it remains diagnostically an extremely useful test. It can be found in the blood in about 80 per cent of patients with rheumatoid arthritis. It is usually not present in young children with this disease, and this limits its diagnostic usefulness at a time when it is most needed. In cases in which it is absent from the blood, it may be present in the synovial fluid. The diagnostic usefulness of the latex agglutination test can thus be increased by seeking rheumatoid factor in synovial fluid. In addition it is possible to demonstrate rheumatoid factor in homogenates of synovial fluid white cells in some cases when it is not possible to find the factor in serum or synovial fluid.<sup>2</sup>

## METHOD OF TEST

This is done by centrifuging synovial fluid to pack the white cells, homogenizing them in any fashion (such as freezing and thawing) and performing a slide latex test for rheumatoid factor on a drop of the homogenate. Using this procedure

## RHEUMATOID ARTHRITIS / Bollet

an incidence of over 90 per cent positive tests on synovial fluid leukocytes from patients with rheumatoid arthritis has been found.<sup>2</sup> In this group of patients there were some particularly interesting cases. Four patients with juvenile rheumatoid arthritis had no rheumatoid factor demonstrable in serum or synovial fluid but did have it demonstrable in the synovial fluid white cells; this may indicate that the first place in which the factor can be found is in precipitates phagocytized by these cells.

The key clinical question is the specificity of this phenomenon. In over a hundred cases, there have been a few false positives, particularly three patients with gout, and the diagnostic specificity is, therefore, not entirely certain at this point, but these so-called "RA cells" or "inclusion body cells" may have significant diagnostic usefulness.

There are important therapeutic considerations which relate to the immune phenomena occurring in rheumatoid arthritis. There is *in vitro* evidence to suggest a mechanism whereby rheumatoid factor, reacting locally with antigen, causing immune precipitates, may contribute to the tissue damage in rheumatoid arthritis.<sup>2</sup> The fact that immune precipitates are occurring in the lesions of the disease certainly brings up the possibility that this phenomenon is actually damaging, at least locally; we know that phagocytosis of immune precipitates activates lysosomal enzymes<sup>2</sup> which apparently play a role in the destructive changes in rheumatoid joints.

Cartilage destruction in particular seems to be accelerated by proteolytic enzymes which can be released in this fashion. This has a therapeutic implication, namely the immunologic aspects of synovectomy. The orthopedic surgeons have a considerable experience in which synovectomy has apparently slowed or perhaps even halted the progression of the cartilage destruction in rheumatoid joints. Pathologically the cartilage destruction in rheumatoid arthritis occurs in areas where synovial membrane proliferation has resulted in a pannus growing over the cartilage; breakdown of cartilage occurs under these areas of synovial proliferation. Removal of this pannus apparently is protective.

It has been suggested that synovectomy is thus preventive medicine, preventing the cartilage destruction. From analysis of a number of cases and from theoretical considerations, this seems to be a reasonable attitude. The phenomena occurring locally in the diseased synovial membrane

may be activating the mechanism of cartilage destruction, and synovectomy thus is an effective means of suppressing the local immune process and its sequelae.

The use of chemical agents to suppress the immune phenomena in rheumatoid arthritis has been studied in a number of centers but the results have been disappointing. This comment can also apply to the use of hydrocortisone and related synthetic steroids in rheumatoid arthritis. Although symptomatic relief can be obtained, there is no evidence that they suppress the immune phenomena in dosages used clinically, and they clearly do not suppress the basic disease process. Since rheumatoid arthritis requires prolonged therapy, it is usually only a matter of time before severe side effects more than nullify symptomatic gain. Deaths from bleeding ulcers are not unusual in steroid treated patients, whereas ordinarily rheumatoid arthritis is rarely fatal. The general consensus of workers in this field, at the present time, is that systemic steroid therapy is rarely, if ever, indicated in rheumatoid arthritis.

In summary, I think we can conclude that immune phenomena are occurring in tissues affected by rheumatoid arthritis. The rheumatoid factor, an antibody to gamma globulin, was the first manifestation of these phenomena to be discovered; it results from an antigenic stimulus in the lesions. The nature of this stimulus is under intensive study; there is considerable evidence that it is a previous antigen-antibody reaction. The nature of the original antigen is totally unknown at present, but many suspect that it is derived from an infectious agent.

These immune phenomena are of considerable clinical importance in rheumatoid arthritis, not only for their theoretical significance, but also because of the diagnostic value of seeking rheumatoid factor in joints, and their relationship to therapeutic approaches to this disease, including synovectomy. ★★★

Medical College of Georgia (30902)

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# Amniotic Fluid Embolism: The Nonfatal Case

MICHAEL NEWTON, M.D.

Chicago, Illinois

AMNIOTIC FLUID EMBOLISM has been known since 1941 to be a cause of sudden maternal death in labor or the early puerperium.<sup>1</sup> Since that time much interest has been shown in this syndrome and its pathogenesis. Clinical and experimental studies have indicated that the entrance of amniotic fluid into the maternal circulation is often accompanied by defects in blood coagulation. The mechanism for this appears to be the deposition of thrombi in small vessels, particularly in the pulmonary circulation.<sup>2</sup> This results in the consumption of fibrinogen and the development of hypofibrinogenemia and possibly of a decrease in plasma thromboplastin antecedent.<sup>3, 4</sup> Prior sensitization has also been suggested as a factor in the severity of the response to amniotic fluid.<sup>5</sup>

Amniotic fluid embolism has usually been considered a fatal disease. However, a recent large series of 68 cases includes one in which the patient survived,<sup>6</sup> and it seems likely that this situation must occur more frequently than is generally recognized. This consideration prompted the report of the following case.

B.J., University Hospital No. 2468, a 33-year-old woman, gravida 9, para 8, was admitted at 3:30 a.m. on Jan. 18, 1966. Her expected date of confinement was sometime during January 1966. She had not been seen at the University Hospital previously during this pregnancy. Her labor had begun at 9:00 p.m. on Jan. 17. At the time of admission general examination was negative. Her blood pressure was 140/100. A fetus of normal size was found in cephalic presentation. Labor

was of moderate quality. The cervix was 6 cm. dilated and the vertex was at station -1. Fetal heart tones were normal. Her hemoglobin was 14.2 gm.

The patient was given meperidine—50 mg. and phenergan—25 mg. for discomfort at 4:05 a.m. At 5:05 a.m. the membranes were ruptured artificially because of desultory labor, since there had been no progress in cervical dilatation or descent. Soon after this the patient complained of pain in the back and shortness of breath. Delivery occurred spontaneously in bed at 5:20 a.m. of a living girl weighing 3210 gm. The baby had an

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*Since 1941, amniotic fluid embolism has been recognized as a cause of sudden maternal death in labor or the early puerperium. The author reviews the rarity, generally fatal nature, pathogenesis, and management of the syndrome, and presents a nonfatal case of presumed amniotic fluid embolism.*

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Apgar score of 9 and breathed and cried immediately. The placenta was delivered at 5:25 a.m. and weighed 787 gm. The placenta and cord were normal. The estimated volume of amniotic fluid was 500 cc., and it was stained with meconium. Immediately after delivery the patient again complained of pain on breathing and shortly thereafter her blood pressure was noted to be 80/60. Moderate vaginal bleeding continued.

During the next hour the patient was given supportive therapy, including morphine, oxygen, Isuprel, atropine, digitalis, Aminophyllin and cortisone. Blood was obtained and started. It was noted at 6:00 a.m. that her clotting time was

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Director, American College of Obstetrics and Gynecology. At the time of authorship, Dr. Newton was from the Department of Obstetrics and Gynecology, University of Mississippi School of Medicine, Jackson.

## FLUID EMBOLISM / Newton

10 minutes with poor clot formation. Pelvic examination showed no evidence of laceration of the uterus or lower birth canal. At 6:20 a.m. the patient's blood pressure was 60/30, and an electrocardiogram supported the clinical diagnosis of pulmonary embolism. Additional blood and fibrinogen (4 gm.) were given.

The patient's condition remained precarious during the morning. A chest x-ray showed a possible hilar infiltrate but no clear evidence of embolism. Following the administration of fibrinogen, blood coagulation improved but moderate vaginal bleeding continued. At 9:00 a.m. her hemoglobin was 11.7 gm. in spite of three bottles of blood. Platelet counts fell to 34,000 with a subsequent rise to 100,000 and 116,000 on Jan. 19. The only fibrinogen level obtained was 300 mg. after fibrinogen and three bottles of blood had been given.

### UTERINE PACKING

During the latter part of the morning, with the patient continuing to bleed and her hemoglobin falling to 9.7 gm. after one more bottle of blood, it was decided to give heparin. The clotting time increased to 34 minutes at 3:00 p.m. and additional heparin was given at 6:00 p.m. One more bottle of blood was given. Later in the evening of Jan. 18 the uterus was adequately explored again and some additional tissue removed. The pathologic report on this showed decidual tissue only with no evidence of placental fragments. After the exploration the uterus was packed. The patient did not bleed through the pack. The heparin was discontinued on Jan. 20 and the pack removed on the same day. The patient then made an uneventful recovery.

The diagnosis of amniotic fluid embolism in this case was based on several observations. First, the patient complained of chest pain and shortness of breath immediately after artificial rupture of the membranes. This continued after delivery and she then developed a clotting defect and electrocardiographic changes suggesting an embolism. It seemed clear that the continued vaginal bleeding was due to a clotting defect rather than to retained placental fragments. The use of heparin was based on an attempt to reduce the amount of clot formation in the pulmonary vessels, but it seems likely that the patient was improving at the time the heparin was given and that this did not make much difference to the outcome.

The dramatic nature and commonly fatal outcome of amniotic fluid embolism result in the label of amniotic fluid embolism being given frequently to a sudden maternal death. However, this diagnosis should be made with care since the condition is quite rare. Thus, Barno and Freeman<sup>7</sup> found only 15 cases in seven years of a maternal mortality study in Minnesota. This gave an incidence of 1 in 37,323 births.

### MSMA RECORDS REVIEWED

Review of the records of the continuing maternal mortality study conducted by the Maternal and Child Care Committee of the Mississippi State Medical Association during the eight year period from Jan. 1, 1957, through Dec. 31, 1964, showed only six possible cases. Three of these were confirmed by autopsy findings while three were diagnosed by clinical impression only. During this time there were 472,150 births in Mississippi, giving an incidence of deaths due to amniotic fluid embolism of 1 in 78,691.

The possibility of the occurrence of nonfatal cases of amniotic fluid embolism should alert the obstetrician to its diagnosis and management. A history of chest pain associated with rupture of the membranes and hard labor and followed by a clotting defect are characteristic. In the woman who dies immediately, as happens in many cases, obviously little can be done except a postmortem cesarean section. When death is diagnosed under these circumstances, it is the physician's duty to perform such a cesarean section as promptly as possible in the interest of the baby. In the six cases studied in Mississippi two babies died undelivered and four emergency cesarean sections were performed. Of these, one resulted in a stillbirth, two in neonatal deaths and one in a living infant.

### SUPPORTIVE MEASURES

If the diagnosis of amniotic fluid embolism is made from the characteristic history and findings and the patient does not die immediately, prompt supportive measures should be instituted, as outlined in the case described. Adequate blood must be given and fibrinogen supplied if the clotting mechanism is defective. Early exploration of the uterus to exclude lacerations is essential. The use of heparin, although based on logical grounds, is still of uncertain value.

### SUMMARY

1. The problem of sudden maternal death, occurring as a result of amniotic fluid embolism, is



reviewed. Its rarity, generally fatal nature and pathogenesis are discussed.

2. A nonfatal case of presumed amniotic fluid embolism is presented, and six cases are reported from the Maternal Mortality Study conducted by the Maternal and Child Care Committee of the Mississippi State Medical Association.

3. The management of fatal and nonfatal amniotic fluid embolism is described. ★★★

79 W. Monroe St. (60603)

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# THRIFTY THERAPY

The alarmed wife consulted the psychiatrist about her husband's problem. "He thinks that he is Jack Benny," she said.

"Please bring him in to see me," said the psychiatrist, "and I'll examine him."

"Don't be absurd," she said. "He would never agree to paying your \$25 fee."

# Radiologic Seminar LV: The 'Butterfly' Perihilar Shadow

CLYDE SMITH, M.D.  
Greenwood, Mississippi

"BUTTERFLY" shadow is a descriptive term, based on the radiographic appearance of a widespread, bilateral, more or less symmetrical parenchymal density, most prominent in the perihilar areas and gradually fading into the adjacent lung parenchyma (Figure 1).

The shadow, when seen, almost always means severe pulmonary edema, and is produced by the outpouring of fluid into pulmonary alveoli. As alveoli air is replaced by fluid, the normal parenchymal vascular markings seen on a radiograph are obliterated and the involved area becomes more opaque. The bronchi, which may remain air-filled, then become visible with a so-called "air bronchogram" effect.

Pulmonary edema is due most commonly to congestive heart failure or to uremia. Other less common causes include: thoracic trauma, connective tissue disorders, inhalation of noxious gases, allergic reactions, central nervous system disease, excessive administration of parenteral fluids, poisoning, and drug reactions.

Seven per cent of uremic patients show pulmonary edema, and the "butterfly" shadow in a patient who is not in congestive failure suggests this diagnosis. The radiographic findings do not always parallel the BUN, however.

Butterfly shadows may rarely appear in non-edematous conditions such as pneumonia, alveolar lymphoma, or alveolar proteinosis. ★★★

Sponsored by the Mississippi Radiological Society.  
From the Department of Radiology, Greenwood Leflore  
Hospital.

1275 River Road (38930)





Figure 1. Butterfly distribution of edema with heart of normal size. Patient essentially symptomless. BUN 65 mg. per cent.



Figure 2. Eight days later, shows chest practically normal, but BUN was 97 mg. per cent.

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#### BOMBS AWAY!

A capable member of the Congress is defined as one who makes speeches in Washington against the bombing of North Vietnam while he gets a B-52 factory built in his home district.

# Home Health Services: Challenge and Opportunity

CLAIRE F. RYDER, M.D., M.P.H.  
Washington, D. C.

IN ORDER TO UNDERSTAND and be ready for the future, it is necessary to study the past. I look at home care as beginning back in 1796 as a new venture for a community and an early sign of a developing social conscience. I would like to call this first era in home care—Social Welfare. The second era we find in home care, which is paralleled by changes in hospital care, is that of Chronic Diseases. The third that we are presently in is the Era of Community Health, and finally, I believe the future might be called the Era of Continuity of Care or Comprehensive Care.

Now the interesting beginning of home care, the first era, covers the 150 years following 1796. The first program was started as the result of action by public spirited citizens for the sick poor in Boston. The goals of the program established at the Boston Dispensary were that these individuals would be cared for in their own homes without being pained by separation from their families. These are the actual words used in establishing this program for the poor, that “. . . they be cared for at less expense than in a hospital, and finally that those who have seen better days may be comforted without being humiliated.”

In other words there was recognition that, at that time, the desirable pattern of care was home care, but for the poor the only pattern of care was hospital care. They were trying to provide services for the poor that, up to that time, had only been

available to the wealthy. Today, we are working hard to see that home care is as available to those in the community who can afford it, as in those days, they tried to make it available to those who could not.

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*Home Care, writes the author, began in 1796 as a new venture for a community and an early sign of a developing social conscience. Dr. Ryder terms this first era the Era of Social Welfare. She notes that the second era is that of Chronic Diseases and the third, the Era of Community Health. She discusses each of these in detail and predicts that the future might be called the Era of Continuity of Care or Comprehensive Care.*

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Returning to this first era of home care, services were directed to the indigent, and only in a very few communities. Progress was extremely slow; but the rationale of this era for home care as a pattern for the poor is still with us today—the theme “keep them out of the hospital” was apparent then as today. A century later visiting nurse associations were established with the same goal and same theme.

The second era, the Chronic Disease Era, started about 1947, lasted until about 1955, and is particularly related to hospital care. It might be termed a period when the hospital extended itself into the community. The prototype of this era was, of course, the Montefiore Organized Home Care Program in New York City, established by Dr. E. M. Bluestone.

This era arose out of overcrowding of hospitals and the recognition that a new pattern of care

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From the Home Health and Related Services Branch, Division of Medical Care Administration, Bureau of State Services, Community Health, Public Health Service, U. S. Department of Health, Education and Welfare.

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needed to be found for the chronically ill and aged individuals who were one of the causes of such overcrowding. Home care was considered as an ultimate solution for the chronically ill, the older, and the indigent or medically indigent patient, who, if the service of a hospital were extended out into his own home, could be cared for there.

Dr. Bluestone said in reference to this kind of pattern of care, "The care of the acute and the care of the chronic should be provided in their own homes, or in the equivalent of their homes, by an extramural hospital program, equal in service to the intramural hospital program." He thought of equalizing services. In other words, the hospital services were extended into the home by using the same staff, the same unit medical records, and the same equipment and supplies. All the other things that came about added to this concept of a hospital extending out into the community. Home care programs were referred to as hospitals without walls, the hospital extension program, the extramural hospital program.

## DEVELOPMENT CHARACTERISTICS

Interestingly, as these programs developed, they still carried with them the social welfare concept. Thus, the number of programs that were started during this era all had certain characteristics: they were directed toward the chronically ill, and toward the indigent and medically indigent. Most important, they emerged out of an internally felt hospital need and they were supported by the hospital. Medical responsibility was carried out usually by the members of the hospital staff itself. The theme song now changed to "get them out of the hospital."

Some other programs were started at this time, but also for narrowly felt needs. Medical schools were concerned about the lack of teaching materials and so established home care programs in order to instruct their students. Welfare programs were established to cut costs of care of individuals in institutions.

This third era, which is the present, started in 1955. The keynote is flexibility. The pattern is now one in which the community evaluates its needs and resources, and develops its own program of home care according to such needs and resources. Thus, we have a remarkable evolution of different kinds of home care.

Some patterns of home care we had never dreamed of before are now becoming commonplace. The former rigid patterns of coordinated home care, or organized home care, are out of the picture in view of the flexibility and variety in

the new programs. We have found that the variations include: types of agencies, types of personnel who administer home care, and kinds of patients who are cared for in the home. In addition to an upsurge in new programs, we also find tremendous quantitative differences from program to program occurring in these ten years; in the kinds and amounts of service provided, and the cost per patient day. Furthermore, we now have a duet of theme songs—keep them out or get them out of hospitals.

## FLEXIBILITY OF SERVICE

Flexibility, the keyword of the modern day home care program, is seen in flexibility of service, based on the variations from community to community in terms of both needs and resources. If we compare the hospital-centered era with the community health era, we find that the establishment of a program is no longer in response to the internal needs of a single agency, as for example: only because a hospital is overcrowded, or a welfare department wants to cut costs of care to its clients. Since 1955, more often the establishment of a home care program is the result of community-wide concern and study, resulting in a program that is broad in scope, in terms of both the patients served and its support.

Patients cared for today in home care programs have illnesses which are acute as well as long term, they are in convalescent as well as terminal phases, and they are moderately disabled as well as severely handicapped. The patients are of all ages, and only a few programs today are limited to the indigent.

An important trend for those of you who are practicing physicians, is that you are being increasingly brought into the picture of home care. No longer the hospital staff, but the practicing physician out in the community is responsible for the care of the patient.

## NEW PROGRAMS CHALLENGING

Health department and VNA administered programs are coming to the fore. We are also seeing the free standing home care agency much more frequently today than before. The three groups: the health department and VNA sponsored programs, and the free standing home care agency are challenging the total of programs administered by hospitals, and are emerging as the new, flexible, community approach to home care.

The origin of this type of home care program is interesting, and I will develop a typical situation to illustrate. First of all, a community council

## HOME HEALTH SERVICES / Ryder

group requests a study or survey of problems in the community. As a result of this study, home care is identified as a high priority need; not only for those who have been hospitalized and are ready for discharge but still require some care, but also for the sick in the community who have not come into the purview of the hospital. For a large number of these latter patients, home care could prevent future hospitalization or institutional care.

As a result of this identification, the health department (or VNA) is asked to administer the program. In turn, the selected administrative agency uses the hospital as an operational unit because through it they can reach the physician, and also the patient who needs care after hospitalization. Program support comes from Blue Cross, Community Chest, fees for services from those who can afford to pay, and voluntary and official health and welfare agencies, Medical Assistance to the Aged, and of course after July 1, 1966, from Medicare. In other words, all interested groups in the community are involved, not just one agency, one institution.

### INFLUENCE OF MEDICARE

And now we come to the challenges and opportunities of home care. In the next decade, because of Medicare, we will be able to capitalize on the best of each of the eras of the past, and greatly expand the scope of home care.

We must recognize that we have already proved home care as a feasible and desirable form of care for certain patients. We must also recognize that hospital involvement is essential to a successful home care program, although it may not directly administer the program, and that services of outpatient and extended care facilities must be related to home care. Most important, we must have broad community interest and support, particularly of the medical profession itself.

We are entering the era when home care will take its place as an integral part of a whole continuum of care, and this is why I refer to the new era, the future era, as one of continuity of care. I believe that the Medicare legislation will foster this concept by providing reimbursement at reasonable costs for home health services. We find ourselves looking at a kind of care as part and parcel of a total continuum rather than at an organizational structure.

This means that we are looking at a form of care that is a better kind of care for an individual. It is not a cheap substitute, it is not a substitute at all, it is a form of care having as much assurance

of quality as we have worked to achieve in the field of hospital care. Home care then, or home health services, should be a tool of the physician, to be used in the total pattern of care whenever needed. Medicare's implications in terms of changing patterns of care provide some tremendous challenges, and I think we have an unlimited ability to meet these challenges.

### QUALITY OF SERVICES

The quality controls introduced by Medicare are significant challenges. Medicare's goal is that reimbursement to any program of medical care will be only for quality care. Above all, we must strive for good quality service, and we are aided and abetted by many things in Medicare. This is the first time in the history of the United States that standards of care have been written into a law. Quite frequently when we have either federal or state laws they refer to the fact that rules and regulations will be promulgated under another document. But here we have actual definitions and standards for facilities and services as part of the act. Congress deliberately excludes services and facilities that do not meet standards, thus we have our first step in quality control. When we have standards in a law we must observe them, even though we may like greater flexibility, and may actually be faced with a hardship in some cases, but it certainly also ought to be an incentive.

A second quality control in the act is the establishment of formal consultative groups to review and recommend program policies and procedures. Social Security and Public Health Service have been developing staff documents as to what standards of care should be established for providers of the various services. These have been reviewed by committees and study groups of outside experts, among them representatives of the American Medical Association, the American Hospital Association and the American Nursing Home Association. These standards and conditions of participation were then reviewed by the top group, known as HIBAC, the Health Insurance Benefit Advisory Council. This council, established in the act, consists of top ranking individuals from all fields of endeavor related to Medicare.

### STATE ADMINISTRATION

Another safeguard which is extremely important to us in public health, is that the act is to be administered at state level. Each governor has been asked to identify a state agency to administer the act for his state. All but two states have named the



state health department as the administrative agency. The function of these state agencies has been simply defined in terms of three C's—coordination, certification, and consultation. What a tremendous opportunity we have in health, regardless of the direct provision of service, to introduce high quality care in each of our states through state health department activities. Most important is that the state may ask for, and receive permission to have, higher standards than those identified in the act or in terms of the conditions of participation.

A fourth safeguard is the National Medical Review Committee which will look at what we have done and what we have accomplished, will review progress made under the act, and will make recommendations. And, lest you think this is a paper committee, the act contains strong language related to studies and recommendations on such aspects of Medicare as the cost of care, the utilization of various kinds of care, and the needs for personnel. Monies have been made available in the act in order to carry out these studies and research.

#### PHS ROLE IN MEDICARE

My own bias shows up when I say that an important safeguard is the delegation of professional health aspects for Medicare, by the Secretary of Health, Education, and Welfare, to the Public Health Service. We are partners with Social Security in terms of these professional aspects; the promotion of consultation, the guidelines, and the assistance that we have been providing to help communities to achieve these services. Our joint goal is to see that Medicare beneficiaries are provided with a quality of care that otherwise we would not have been capable of achieving. The Division of Medical Care Administration, of which I am a part, was established in August last year as a focal point for medical care administration in the Public Health Service.

The division has a dual role as focal point, because there are two separate things that we must consider and that we are carrying out. First of all, one of the major functions of the new division is the necessary staff work on standards, on how to certify, what to certify, and where to certify; on the development of guidelines; and the development of training in administrative matters. All of these things are being carried out as one of the prime functions of the division. These are the professional health aspects of Medicare itself.

Those of you who remember the arguments we used when we were trying to get the Community Health Services and Facilities Act passed over five

years ago, will remember President Kennedy indicating that to what avail is it to be able to pay for a service if that service is not available to the community. Therefore, a great deal of our activity in the Division of Medical Care Administration is around the promotion and development of the community services necessary before Medicare can be effective.

#### HELPING AGENCIES START

In home health services one of the greatest and most immediate needs is being met by a \$9 million formula grant program to state health departments. This program is enabling the state to assist communities in getting the first steps started in terms of home health agencies. The goal is to achieve the largest number of agencies eligible for certification, covering the largest population possible in the state, and to do this in the shortest possible time, with the least amount of effort.

The expenditure of this \$9 million to build facilities is only a beginning point. Probably the most important and sustaining support will come from Medicare itself. In most of our programs about 50-60 per cent of the caseload is the age group of over 65. Medicare, as of July 1, 1966, will give a good deal of support to future activities in home health services.

Probably the most important and significant quality control in Medicare is that it is not a medical care program *per se*. It is a program of payment for certain services provided to persons over 65. Therefore, the responsibility for providing high quality care rests exactly where it rested before the President signed the act—with the medical profession and allied health personnel who give the care. It rests with the voluntary and official agencies and organizations who administer the program of care. It rests with community leaders who must see to it that their citizens can receive the care needed. Therefore, I think that the look to the future indicates an unlimited challenge to our imagination for providing good quality care and new patterns of care.

#### PAYMENT BASED ON QUALITY

The act gives us some positive building blocks that can lead to good patterns of care. For example: all services must emanate from certified providers of care, so we assure that quality care is rendered before we reimburse; the state agency must be assured that standards continue to be met by these providers of service.

The physicians' role in home health services is paramount. The services that are rendered to the patient may be reimbursed only upon certification

by his physician that these are necessary to care, and furthermore, the plan of treatment must have been developed (with the assistance of the home care staff) and approved by his physician. The physician must periodically review the plan of treatment and modify it according to the patient's needs at least every two months.

The third kind of positive building block that we have is that all hospitals participating in Medicare, as well as participating extended care facilities, must have a utilization review as stated in the act. Though utilization reviews *per se* are not required for home health agencies, the evaluation of each patient on admission as well as periodic program evaluation achieve much the same result.

This is also a positive step toward continuity of care; it will provide a way by which the physician can determine that continued care is necessary, either in the same facility, in another facility, or in the home. This is exactly our goal in continuity of care. To further the concept of continuity of care, hospitals and extended care facilities must develop transfer agreements. All of these things point to the need to keep a thread of care overall throughout the entire course of illness. This is a continuing, rather than a chance movement from one facility to another, thus we can avoid what sometimes develops in our present system of care—the gaps through which the patients fall.

The fact that reimbursement will be on a reasonable cost basis is an opportunity to develop the kind of program that is needed. I think all too often we have programs developing in agencies and a charge determined with no relationship to cost. Whenever you have an overall average fee or charge established for a community or region or even state, some agencies spending more than this are inclined to drop services in order to make ends meet. On the other hand, those who are not providing services and have a much lower cost than the standard reimbursement, will have a tendency to remain at that low level of care because they can make money.

The patient suffers whenever reimbursement is below the actual cost of delivering the service. Medicare, providing reasonable cost reimbursement, will allow expansion and increase the service without penalty to the agency. Allowable costs will be paid, whatever those costs were to produce the service, so we have a way of reimbursing the agency and continuing to reimburse at higher and higher levels, according to the services the agency has introduced.

One aspect of Medicare we should keep in mind is that although we have standards set for home

health services they are in many respects minimum. Certainly we need to reach for the ceiling. We need constantly to move upward toward the goal of providing comprehensive care in the home.

I don't think that any discussion of medical care, patterns of care, or home care, ever gets by without mentioning: "How are we going to do it with the lack of people we already are facing?" Shortage of personnel is another negative aspect, but it is where imagination, ingenuity, and a willingness to look for other methods are going to win. We need to look carefully at how we are using our present professional personnel. Are we using them only for the special skills that they were trained in or are we using them in far lesser skilled functions that someone else could do? The first step then is to identify how well we are using our own professional people.

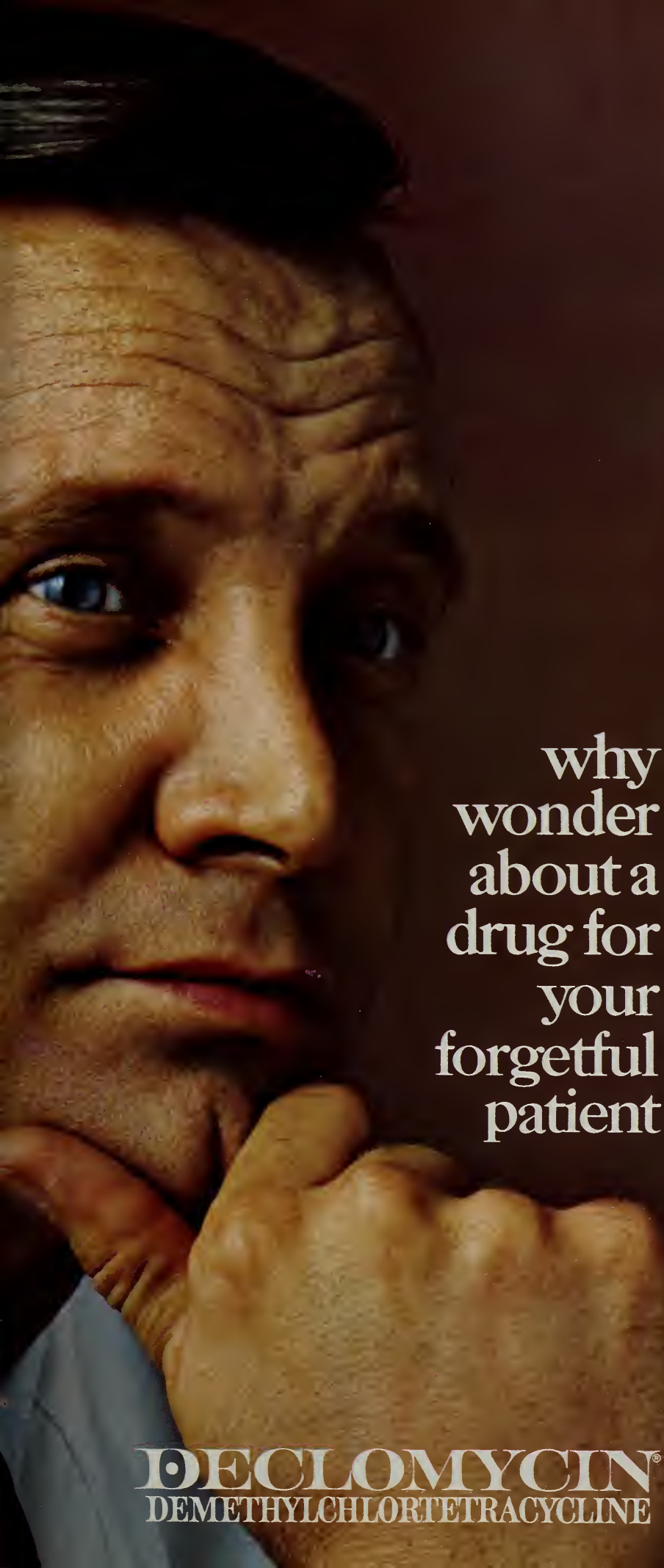
Secondly, in the job to be done, who else can help? Who else can take care of some of the other care needs that the patient may have? We need new ways of providing additional hands. And I never say this without indicating that one of the most important areas to look for additional hands is in the patient's own family.

I think that we need to keep our eyes open during the next few years to identify not only wasteful personnel methods, but how to close the gaps in the shortage of personnel. I think we need to look more closely and carefully at factors such as: how do you determine patients' needs, how do we know what patients need to receive at what level of care? I think these answers will come. It must be your goal as well as that of all health personnel to see that we find these answers, that we use this unlimited opportunity that I see to provide high quality medical care to all in the community, as well as to people over 65.

I am not sure that I have been able to do more than just cut across the mountain top, but it does seem to me that the future offers an exciting vista. Perhaps it seems that there are a lot of challenges. Maybe I have not stressed as many opportunities, but to me challenge and opportunity are two sides of a coin. Each challenge also offers the opportunity, through constructive effort, to provide comprehensive care, a pattern of care that is described by the old cliché, "the right patient, in the right bed, at the right time." If we do develop this idea of continuity of care and comprehensive care, home care will come into its own. Home care will no longer be the cheap substitute way of emptying hospital beds, the way of substituting one kind of care for another. Home care will come into its own as a legitimate part of a total continuum of medical care. ★★★

U. S. Public Health Service (20203)





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Department of Pathology  
Mississippi Baptist Hospital  
Jackson, Mississippi

Gross and microscopic evidence of prematurity but easy diagnosis on the infant single umbilical artery. At delivery the patient developed. Medical consultation was obtained. The patient showed a healthy-appearing skin moisture and warmth.

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*primigravida developed following premature membranes and delivery of a. Differential diagnosis included placenta, amniotic fluid embolism, the Reizman phenomenon, and diabetes. Certain clinical findings raised the questions of diabetes mellitus and toxicosis. The discussers are: J. B. Wooley, III, O. B. Wooley, and J. B. Wooley.*

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tachycardia of 150/minute, 100/90, and no murmurs, abnormal, or evidence of congestive heart failure. The heart rate slowed for one to two seconds after chest massage. EKG showed normal. The patient gave a history of taking a thyroid tablet a day for six months. No therapy was given.

Continued, with the rate varying from 130 to 170, and the blood pressure around 110/80. The following day the tachycardia was still present and the temperature was 100.2° orally, rising to 100.4°. Laboratory work at this

time showed CO<sub>2</sub> combining power of 15, chloride 115, potassium 5.7, and sodium 133 mEq/l. An order for blood glucose was written but there is no record of its being done. T<sub>3</sub> test was 25 per cent. Digitalization was started. The urinary output remained good. Respiration remained normal.

The following morning (approximately 40 hours after delivery) the patient was found to be shock-like with an irregular pulse of 180. Blood pressure could not be obtained. She was conscious, and there was no hyperpnea or Kussmaul breathing. Levophed was started, and blood pressure initially reached 90/60, although after one to two hours it could not be maintained at measurable levels. The EKG showed supraventricular tachycardia. Digoxin and quinidine were given. A blood culture was obtained and intravenous antibiotics were started. Three hours after she was discovered to be in shock the patient expired despite resuscitative attempts.

### CLINICAL DISCUSSION

*Dr. T. E. Wilson, III:* "This was the case of a 24-year-old woman who was admitted to the Baptist Hospital with the complaint of 'leakage from the bag of waters,' at six months' gestation. I would like to know whether this was her first pregnancy or whether she had had multiple pregnancies. I will assume that she had been followed by a physician throughout most of her pregnancy. The examination showed a healthy, normotensive, afebrile pregnant woman.

"The fetal heart tones were strong, with a rate of 140 per minute. This is within the normal range of 120 to 140 after the 20th week of pregnancy. The cervix was unripe, the presentation vertex, and at this stage I understand that presentations can shift around. The membranes appeared to have ruptured spontaneously. I'm not sure how you would differentiate a spontaneous rupture of the membranes from other causes. I assume this implies that she did not have any vaginal manipulation to rupture the membranes.

"Laboratory work as it is showed a hemoglobin of 12 gm. per cent and a hematocrit of 39 per cent, probably not significant in this situation. The urine was clear, specific gravity was normal, and there was no albumin, all against basic renal disease or toxemia. But the sugar was 3+. As far as I could tell, this was the outstanding finding on this admission other than the fact that she was pregnant and had ruptured membranes.

"I think any urine sugar brings up the possibility of a diabetic state. There are a number of

other causes of glycosuria, of course. Thyrotoxicosis would be one. Another is the isolated finding of glycosuria with a fasting blood sugar below 100 mg. per cent. This is considered a nondiabetic state. Then, there are others like renal tubular defects and Fanconi's syndrome, amino-aciduria and so forth. There is also transient renal glycosuria which tends to run in 10 per cent to 15 per cent of pregnancies. Nephritis can show a transient renal glycosuria. Hepatic dysfunction at times when there is decreased glycogen deposition and storage can show a transient glycosuria.

### THYROTOXICOSIS POSSIBLE

"It seems appropriate to keep thyrotoxicosis in mind when you go through this patient's history. Other causes of nonglucose melituria would be ketosuria, fructosuria, galactosuria, and lactosuria, which you might see in pregnancy, but by using the glucose oxidase methods available now (Clinistix and TesTape), the tests are specific for true glucose. We will assume that she's probably had a diabetic check early in her pregnancy and was not considered a diabetic, as the glycosuria was not investigated any further.

"This patient apparently did run a course consistent with premature rupture of the membranes. She was hospitalized for six days and treated conservatively. She apparently had an uneventful course as far as her physicians were concerned. At this point I had to refresh myself a little bit about premature labor, and it is my understanding that early in pregnancy, abortions are usually due to fetal causes and later in pregnancy premature labor is usually due to maternal causes, as a deformity of the pelvis, but the causes tend to be more on the maternal side.

"The second admission was the following morning, less than 24 hours after her discharge, when she came in with spontaneous premature labor. We don't have any history at this point, but it would be worthwhile to know, again, what transpired during this interval, whether there were any further attempts at induction of labor, whether sexual intercourse occurred, whether she took a tub bath, all of which are among the causes of possible infections after the membranes have ruptured.

### STILLBORN DELIVERED

"The hemoglobin was 16.5 gm. per cent this time, and the hematocrit was elevated. This could represent one of two things: hemoconcentration or fluid loss of some sort has occurred, or perhaps a laboratory error. Nevertheless, after two



hours of uncomplicated labor she delivered a stillborn infant. The other thing that isn't very clear here concerns the fetal heart tones during this latter part of the first admission. Apparently, when she came in the second time, there were not any fetal heart tones.

"Blood loss was not excessive. The placenta was intact in the delivery room, but showed 20 per cent abruption. The placenta was found to have only one umbilical artery instead of the usual two. Normally there are two arteries and one vein, the vein carrying blood to the fetus and the arteries removing it, so perhaps with one less artery fetal life could still go on. Apparently this finding is not too significant.

"The infant was a three pound, ten ounce, 1,650 gm., stillborn. It appeared to be at six months' gestation. In looking this up, this is a little large and would suggest that a large infant was developing. The examination of the premature infant, other than the single umbilical artery, was not remarkable, nor enlightening.

#### PREMATURE DELIVERY

"At this point we do not really know what to make of this premature delivery. I understand that premature labor occurs in about 7 per cent of this population, and that there is a 10 per cent spontaneous abortion rate. The maternal causes in premature labor include hypertensive disease, toxemias, abruptio placenta, placenta previa, and multiple pregnancies. Again, a history would have helped here, as to whether this was her first pregnancy. Syphilis this day and time is probably unlikely. I couldn't interpret from the protocol whether the placenta was really infarcted. I'm not familiar with the aspects of the placenta having been hemorrhagic.

"We should consider endocrine disturbances with progesterone or estrogen deficiency. Diabetes always comes up. Well, suppose there was an abruptio; the protocol mentioned 20 per cent abruption. I would have to get obstetrical consultation at that point. Abruptio is a separation of a normally implanted placenta that occurs after the 20th week of gestation. There can be concealed hemorrhage in 20 per cent of cases, or external bleeding in 80 per cent. I tend to rule abruptio out because of the absence of evident blood loss and the other comments in the protocol.

"One of the things that can occur with abruptio that might be worth mentioning is fibrinogenopenia, with the manifestations of shock, ecchymosis, profuse bleeding, lab studies of prolonged clotting times, abnormal clot retractions, prolonged prothrombin times; the history wouldn't

suggest anything that disastrous. Also, with abruptio, amniotic fluid embolization may occur, through the venous plexuses of the uterus. The emboli material is nonthrombotic, in the form of mucinous meconium, lanugo hair, and other particles; anaphylactoid shock can result.

#### DEVELOPMENT OF TACHYCARDIA

"The next thing that happened was the development of tachycardia. Normally bradycardia occurs right after delivery, so this makes the presence of a tachycardia even more significant. Medical consultation was obtained. At this time she appeared healthy for the postpartum period. The eye-grounds are not mentioned. There was no history of diabetes in the family, no history positive or negative about the size of the babies and so forth. One still wonders about diabetes.

"With the sudden onset of tachycardia, pulmonary embolism is thought of. The rate of 150 per minute could be due to auricular flutter, with auricular rate of 300 and a ventricular rate of 150 (2:1 block). It is somewhat fast for sinus tachycardia. Paroxysmal atrial tachycardia would be rather unlikely, I think, in this circumstance. Carotid sinus massage failed to stop the tachycardia, but it slowed a little; this could go along with sinus tachycardia. If it had stopped abruptly, then paroxysmal atrial tachycardia would have been a good possibility. Nevertheless, she had no pulmonary signs or other evidence of congestive failure.

"She gave a history of being on thyroid. Well, again this could have been desiccated thyroid, thyroxin, or Cytomel, and even one of the anti-thyroid drugs, as far as we know; but probably USP thyroid. This becomes important later, I think, in trying to interpret the  $T_3$  test. Her tachycardia continued and her blood pressure remained normal.

#### TEMPERATURE ELEVATION

"About 24 hours after admission she developed fever, 100.2°, and 101° that evening. This almost by definition puts her in the group with patients having puerperal fever or morbidity in their postpartum course. Why the serum electrolytes were determined, I'm not sure, unless there was further feeling that she had diabetes with diabetic acidosis.  $CO_2$  was 15. Other electrolytes were essentially normal. The  $CO_2$  of 15 is low, but I understand this can be low in pregnancy, too, explained on the basis of a metabolic or a compensated alkali deficit with proteins and other anions being de-

creased. Again I would like to get the obstetricians to comment on this.

"You get a low  $\text{CO}_2$  in diabetes with metabolic acidosis, because of ketones and other acids retained, but you also get a low  $\text{CO}_2$  because of metabolic acidosis in gram-negative septicemias. Whether this is a metabolic acidosis or a respiratory alkalosis is not readily explained, I don't think. An arterial pH at this time would help. Apparently because of the history of thyroid medication, a  $\text{T}_3$  test was done. The PBI is elevated in pregnancy and a  $\text{T}_3$  is lowered in pregnancy. This is explained on the basis of thyroxin-binding globulin being elevated because of the estrogens in pregnancy. Twenty-five per cent is low normal for nonpregnant patients.

"Digitalization was started, I assume just to slow the rate down. The urinary output remained good. Twenty-four hours after delivery passed, and we still don't know exactly what the trouble is. She continued to have a tachycardia. The next morning she was found to have an irregular pulse, and no blood pressure. She was conscious—there were no unusual respirations—and then other steps were taken to try to improve her general condition, without any luck.

"I think, in summary, that this lady had premature rupture of her membranes followed by an infection. Perhaps she also had amniotic fluid embolism, but because this usually occurs suddenly and dramatically, I tend to exclude it. I think she probably had a severe endometritis and expired from a septicemia."

Dr. William B. Wilson: "Thank you, Dr. Wilson. Dr. Wooley has been asked to comment briefly on this case, also."

## OBSTETRICAL CONSIDERATIONS

Dr. O. B. Wooley: "I'd like just to mention a few points. First, we have the ruptured membranes. This brings up the question of just what could be done at this point in the way of treating these patients that have spontaneous rupture of membranes at, say, six or seven months' gestation but are not in labor. I think many studies on large groups of patients have been done that would give support to the way in which this patient was managed; that is, when the patient was not in labor she was managed conservatively and sent home without antibiotics. Now, if she went into labor, I think certainly at this point it is felt that the patient should be on antibiotics.

"One might ask, 'Well, what difference does this make; why do we treat the patient at any

point with antibiotics?' We are interested primarily in both infant and mother, and I think these large series which have been done on this type patient have shown that whether you treat them with antibiotics or not actually makes very little difference in the outcome so far as the fetus is concerned.

"Pediatricians, I am sure, might take issue of this. They feel much better when we put these patients on antibiotics. There is no question about the fact that the antibiotics traverse the placental barrier and get into the infant's blood stream, but I think statistically the morbidity and mortality of infants is little changed as to whether we do or don't treat them. So far as the mother is concerned, I think there is a definite advantage to treating them. I think their morbidity and mortality is definitely decreased when they are treated vigorously with antibiotics.

## PROBABLE ORGANISMS

"As to which antibiotic, I think here again three organisms are usually found when a patient gets amnionitis or endometritis from premature rupture of her membranes. Certainly *Escherichia coli* probably heads the list; *Aerobacter aerogenes* and *Proteus* are the other two that we think of when we consider septic shock from the premature ruptured membranes and subsequent infection.

"I think it seems to be a little unusual that this patient's hemoglobin, run six or seven days prior to her final admission, was 12.5 gm. per cent and hematocrit 39 per cent and then one week later she showed definite evidence of hemoconcentration, judging by these measurements. Whether this was due to dehydration or whether it represents something else, I think, is open for discussion. One wonders also why the infant, which was perfectly viable on the first admission, as judged by the fetal heart tones, upon admission again, apparently either prior to labor or during labor, died.

"Possibly this was in connection with the partial premature separation of the placenta with 20 per cent abruption; however, I think certainly we see cases with as much as 50 per cent abruption of the placenta and the infants do well; so our question really is whether the 20 per cent abruption was the cause of the infant's demise during the process of birth. Because of the abruption you wonder again if there is some vasoconstrictive mechanism going on in this patient, which might also have compromised the fetal blood supply.

## SINGLE UMBILICAL ARTERY

"Insofar as the single umbilical artery is concerned, I think there have been many things writ-



ten in recent years about this phenomenon and its association with the congenital anomalies in the infant. On the other hand, certainly we have seen some cords with only a single artery but with no abnormality of the infant.

"It would be interesting to know whether this patient was catheterized at the time of delivery and whether or not the uterus was explored. I think many of us do not hesitate to explore the uterus following delivery of the placenta and in most instances have not found that this increased the postpartum morbidity in these patients. However, I think it's always true in patients that get an endometritis, that we have to reflect on those cases who did have manual exploration of the uterus at the time of delivery as to whether or not this organism was introduced into the uterus at this time.

"The tachycardia immediately post partum is of interest. There was no suggestion of anemia and apparently no suggestion of any acute circulatory catastrophies related to the delivery. Acute blood loss was not apparent, overtly, and the normal blood pressure tends to exclude concealed blood loss, so this did not appear to be the cause of the tachycardia.

#### DIABETES CONSIDERED

"Many of the things that have been brought out in this discussion make you wonder about diabetes, whether or not the urine reducing substances represent glucose in the urine, the fact that she did have a possible vasoconstrictive process going in which can be associated with diabetes, or the fact that she did deliver prematurely which is associated with diabetes, the fact that other laboratory studies showed that she was acidotic makes you, again, wonder about this diagnosis. Whether or not the size of this infant was in truth large for this stage of gestation, I think, would be open for debate. Certainly we know that diabetic patients have large babies.

"The temperature elevation of 100.2, if I interpret this correctly, is during the first 24 hours post partum and this would not be by definition a state of morbidity. This is not unusual during the first 24 hours after any patient has had an anesthetic, and I assume that this patient did have an anesthetic. Here again, we aren't told what type anesthetic she had, whether it was inhalation anesthetic, or whether she vomited at the time of delivery or as a result of anesthesia with possible aspiration or aspiration pneumonia, or whether she had some degree of atelectasis that might account for the slight elevation in temperature.

"I think certainly we would have to consider pulmonary embolus, and would have to consider septic shock. I think many of the things that have been brought out here would certainly go along with septic shock or gram-negative septicemia. However, the clinical findings apparently did not bear out any clear-cut diagnosis and I think we are left with still somewhat of a problem in diagnosis in a young woman, 24 years of age, that apparently was in good health and suddenly died."

#### STAFF DISCUSSION

*Dr. William B. Wilson:* "Thank you, Dr. Wooley. The patient was a primagravida. The placenta was not infarcted. There was no record of her being catheterized at any time or of the uterus being explored. Does anyone have any questions or comments?"

*Staff Member:* "What did the urine show on the second admission?"

*Dr. William B. Wilson:* "There is no urinalysis recorded on the second admission."

*Dr. James Griffin:* "There was no specific mention made of the fact that we had a lady come in with a 3+ urine sugar and a hematocrit of 39 per cent who then came back later with a hematocrit of 49 per cent and suddenly died in shock; this suggests possibly pancreatitis."

*Dr. William B. Wilson:* "I agree the combination of hemoconcentration, urine sugar and shock raises the question of pancreatitis. I suppose this would have to be unrelated to her pregnancy and delivery. I don't know of any syndrome relating pancreatitis to premature rupture of membranes or other complications of pregnancy."

*Staff Member:* "Did she have pain in the abdomen?"

*Dr. William B. Wilson:* "No."

#### DIET-INDUCED GLYCOSURIA

*Dr. David M. Switzer:* "I would like to make two comments, the first, regarding the patient's urine. Probably, this woman was brought in after breakfast one morning and she might have had pancakes with syrup. In a pregnant patient this could cause glycosuria. The second point that I would like to bring out is that this woman might have rheumatic heart disease, and if this were so, it could account for her difficulties post partum."

*Dr. William B. Wilson:* "Rheumatic heart disease certainly has to be considered. There was not any history of rheumatic fever, and the cardiac auscultation by the attending physician and medical consultant was very thorough and apparently no murmurs were evident. I think, clinically,

rheumatic heart disease was pretty well excluded. As far as the glycosuria representing or not representing diabetes, I think that's one of the problems in this case. Even if she were not overtly diabetic, wouldn't the renal glycosuria of pregnancy be considered a pre-diabetic state?"

*Dr. Walter Simmons:* "We see it very often, and it usually doesn't mean anything clinically."

*Dr. T. E. Wilson, III:* "I saw one study<sup>1</sup> of fasting and two-hour postprandial blood sugars in a group of pregnant patients; before pregnancy and at four months' gestation the sugars were normal; at six months the fasting and two-hour postprandial sugars were high, and the glucose tolerance curves were found to be high."

*Dr. William B. Wilson:* "Apparently, the impaired glucose tolerance of late pregnancy accounts for the 3+ urine sugar. I think the clinicians interpreted it that way. Clinically, this woman did not die the death of diabetic acidosis. This would certainly have been recognized."

*Dr. William Rosenblatt:* "Was this patient hypertensive? Could the blood pressure of 110/80 have represented shock in her?"

*Dr. William Wilson:* "There is nothing in the record to indicate that this woman had any hypertension or evidence of pre-eclampsia, so I think we can assume that this blood pressure of 110/80 was normal for her."

*Staff Member:* "Did she vomit at delivery?"

*Dr. William Wilson:* "No, there was no vomiting, or question of aspiration."

*Dr. Robert Tyson:* "Was she breathing rapidly? This would have suggested a pulmonary embolus."

*Dr. William Wilson:* "No mention of hyperpnea was recorded in the chart. Dr. Wilson mentioned the possibility of a pulmonary embolus."

*Dr. T. E. Wilson, III:* "Besides a large embolus, she also could have had multiple small emboli from postpartum endometritis with associated cellulitis or peritonitis of the pelvic region."

## AUTOPSY FINDINGS

*Dr. William Wilson:* "Any further questions? Then we will go ahead with the pathological discussion. At autopsy the legs were of equal size and showed no edema. The body cavities were not remarkable, and the heart weighed 350 gm., which is normal. The right ventricle was slightly dilated. There was only one coronary artery. This arose from the right aortic sinus and followed the coronary sulcus, giving off four branches to the left ventricle. The heart valves were normal. The blood culture taken at autopsy was negative, and the

antemortem blood culture, taken before antibiotics were started, also was negative. The pulmonary artery and its major branches were dissected *in situ*, and showed no gross emboli.

"The lungs were normal in size without evidence of atelectasis, the right weighing 325 gm., and the left, 300 gm. The lungs were dry on cut section, with no congestion. No pulmonary emboli were detected grossly. However, there was seen a cuff of grayish discoloration around the small vessels.

"The liver was swollen, yellow, and distinctly fatty, weighing 1,600 gm. The major blood vessels, GI tract, gallbladder, pancreas, spleen, adrenals, kidneys and bladder, were all grossly normal. Urine culture grew out *E. coli*.

## UTERUS DESCRIBED

"The uterus showed the usual postpartum enlargement. It was pink and not crepitant or foul-smelling. The cervix was a normal, bluish color. The uterine and ovarian veins were noted to be distended. These were not dissected. This distension was thought to be the normal postpartum state at the time. The endometrium showed thrombosis of the sinuses of the decidua basalis at the placental site and, as I said, was not crepitant, purulent, or foul. Culture of the endometrium showed enterococci and *E. coli*.

"The brain was normal. The pituitary showed some hypertrophy which was thought to be normal for a woman at term. The thyroid was normal.

"Microscopically, the heart showed no myocarditis. The lungs showed numerous, small pulmonary emboli in the arterioles and small arteries. These showed no evidence of organization and were not more than a few days old. There was no pulmonary infarction, or other significant changes, except for some atelectasis. The liver showed diffuse fatty metamorphosis. This was finely dispersed, intracellular fat without the formation of large fat globules or fatty cysts. The fatty change, though diffuse, was actually only moderate in degree. It was not accompanied by hepatic inflammation, hepatocellular necrosis, or fibrosis. The kidneys, adrenals and other viscera had no fibrin thrombi.

"The other microscopic findings of interest were confined to the uterus. The decidua basalis showed thrombi closely resembling the emboli seen in the lung. There were mild inflammatory changes in the decidua basalis, which were about what one would expect in a postpartum uterus. This was certainly not a fulminant endometritis or myome-



tritis in any sense. Similar, recently formed thrombi were seen in the dilated myometrial uterine sinuses, also, and the periuterine retroperitoneal connective tissues.

"This myometrial and pelvic venous thrombosis was thought to be secondary to the seven-day-old rupture of the membranes. In normal labor, the dilated veins of the myometrium collapse with contraction of the uterus and do not undergo thrombosis, nor do the pelvic veins undergo thrombosis, of course. So these thrombi are a distinctly abnormal finding and are probably related to the ruptured membranes with possibly poor contractility of the uterus. The veins of the decidua basalis undergo thrombosis normally in the second stage of labor.<sup>1</sup> I think the myometrial and pelvic thrombi are the source of the multiple small pulmonary emboli. They are the same size and age.

"To return to the other findings in the uterus, culture of the endometrium showed enterococcus and *E. coli*. Microscopically and grossly there was a bland, superficial endometritis, and I think it was probably physiological. Eastman<sup>1</sup> describes a common, mild, postpartum endometritis. He mentions specifically the anerobic streptococcus and the colon bacillus as the usual agents in this condition, which is associated with a low-grade fever. That description closely fits the present case.

#### ADDITIONAL FINDINGS

"This case has so many more facets that I'm going to have to take them one at a time, and we'll start with the easiest. The single coronary artery is a normal variation and is not associated with any clinical manifestations. Apparently, if the anomalous coronary circulation can support the fetus *in utero*, there is no insufficiency in later life. This anomaly is encountered incidentally at autopsy in patients of all ages. I cannot relate the arrhythmia to this anomaly. Arrhythmia, as Dr. Wilson mentioned, is a known manifestation of pulmonary embolism. The single umbilical artery was mentioned in the clinical discussion; I won't belabor it further. It is associated with a significant percentage of congenital anomalies in the fetus, and occurs in about 1 per cent of births.<sup>2</sup> Interestingly, it is never found in twins, so apparently there is some compromising of the fetal circulation due to the single umbilical artery, although it does act physiologically as a vein.

"Regarding the question of diabetes mellitus, we had no anatomic evidence for this in the form of hyalinization of the maternal Islets of Langerhans, hypertrophy of the infant's Islets of Langerhans, or nodular or diffuse sclerosis in the mater-

nal renal glomeruli (Kimmelstein-Wilson change). The fatty liver would go along with diabetes, but we have some other explanations for that. I am satisfied that the late pregnancy explains the urine sugar.

#### URINE SUGAR

"Incidentally, the sugar content of amniotic fluid is only 20 mg. per cent,<sup>1</sup> while a 3+ urine sugar results from about 1,400 mg. per cent sugar in the urine, so contamination of the specimen with amniotic fluid could not explain the sugar in the urine. As for the low CO<sub>2</sub> combining power, this woman undoubtedly had some alteration of the blood volume post partum and may not have had good physiologic compensation for normal stresses. The other possibility to me was that this was respiratory alkalosis resulting from subclinical, or unrecognized, hyperpnea due to pulmonary embolization, hyperpnea being a very common clinical sign of pulmonary embolization.

"As for the fatty liver, I'd like to consider the syndrome of fatty liver of pregnancy which has been written about some lately. It usually presents as rapidly progressive jaundice in a woman at term, and clinically resembles fulminant hepatitis except that there is only a low elevation of the SGOT and SGPT. It was first described by Sheehan,<sup>3</sup> and soon afterwards by Dr. Frank Whitacre<sup>4</sup> when he was in China. A recent article<sup>5</sup> has linked about half the cases with the use of intravenous tetracycline.

"I don't think this patient had fatty liver of pregnancy, at least not the fullblown, usually fatal, syndrome. She was not jaundiced, and the liver picture microscopically doesn't resemble what has been described in this syndrome. Pregnancy actually causes some tendency toward fatty liver, possibly because of increased plasma lipids and cholesterol, and pregnant patients seem to tolerate insults to the liver less well than nonpregnant ones.<sup>1</sup> She also had probably not eaten too well in the week of her illness and had been in shock for a few hours before death; both these could contribute to fatty change in the liver.

#### SCHWARTZMAN PHENOMENON

"The clinical setting and manifestations in this case are not incompatible with the diagnosis of the generalized Schwartzman phenomenon, which occurs in cases of septic abortion, and in cases of premature rupture of the membranes followed by chorioamnionitis and placentitis.<sup>6</sup> It is thought to result from repeated leakage of endotoxin into the

maternal circulation from the infected uterus, resulting in disseminated intravascular coagulation. Anatomically, the unit lesion is widespread deposition of tiny fibrin thrombi in the visceral capillaries and arterioles.

"Fatal cases characteristically manifest bilateral renal cortical necrosis (a long-recognized postpartum catastrophe), and Waterhouse-Friderichsen type hemorrhagic infarction of the adrenals. Multiple tiny infarcts may be found throughout the body. In the present case, the clinical course plus the multiple small pulmonary emboli (thrombi?) raise the question of generalized Schwartzman phenomenon. However, the anatomical findings do not support the diagnosis. Although some of the clots in the lung were arteriolar or capillary in size, most were about 0.1 to 2.0 mm. in diameter, and a few even larger. Furthermore, careful search failed to reveal fibrin thrombi or infarcts elsewhere in the body, and adrenal and renal cortical necrosis were absent.

#### POSTPARTUM EMBOLISM

"Lastly, we have the question of postpartum pulmonary embolism in relation to this case. In two large series from big hospitals in the East,<sup>1</sup> one about 30,000 deliveries, the other 40,000, there was an incidence of postpartum pulmonary embolism (fatal and nonfatal) of almost exactly one per thousand. In a report of the Ohio Medical Committee on Maternal Death,<sup>7</sup> 61 out of 454 cases of maternal death were due to postpartum pulmonary embolus, making it a cause in 13 per cent of postpartum deaths. This was a rather surprising figure to me.

"In this particular report, the committee described their three most recent cases in detail. In one, the fatal embolism occurred six weeks after a spontaneous abortion and its source at autopsy was found to be a thrombosed uterine vein. In another case the source was from multiple uterine and placental infarctions. This case presented clinically as abruptio placenta. Interestingly, all three cases presented as unexplained shock, just as the present patient did. The source of the emboli is usually not in the legs, but almost always in the pelvic veins.

"Several authors have commented on that. VillaSanti,<sup>8</sup> from the University of Maryland, comments that thrombophlebitis is very rare in pregnancy, but very common in postpartum states, oc-

curing almost ten or in some series even a hundred times as often post partum as it does during pregnancy. He postulates an altered coagulation mechanism in connection with parturition, and he says that anticoagulant therapy in the parturient woman is not hazardous as far as bleeding from the placental site goes. Apparently, tissue hemostatic factors here make up for a deficiency of plasma thromboplastin or prothrombin.

#### FINAL DIAGNOSIS

"The final anatomical diagnoses were (1) multiple small pulmonary emboli from thrombosed myometrial sinusoids and the pelvic venous plexus, probably secondary to premature rupture of membranes; (2) superficial endometritis due to *E. coli* and *Strep. fecalis*; (3) fatty metamorphosis of liver; (4) single coronary artery. Does anybody have any further comments or questions?"

*Staff Member:* "Does your list of final diagnoses include shock due to gram negative bacteremia?"

*Dr. William Wilson:* "No. We have two negative blood cultures, one taken antemortem before antibiotics were started, and one taken postmortem. The patient did not have chills or high fever, nor did she have the hot, dry skin which is often seen in the early stages of endotoxin shock. Furthermore, the autopsy showed no focus of significant infection. Some postulate<sup>9</sup> that endotoxin shock with negative blood culture can result from the release into the systemic circulation of large amounts of endotoxin or nonviable bacterial products from an isolated focus of infection, without the concomitant release of viable bacteria.

#### SHOCK RULED OUT

"Although this event seems theoretically possible, it would seem to me to be a rather unusual occurrence clinically. The reported series of endotoxin shock, which I have looked up, implicitly or explicitly consider a positive blood culture a *sine qua non* for the diagnosis of endotoxin shock, although, admittedly, most of these series have been retrospective studies of cases selected by review of all known cases of bacteremia. Be that as it may, I find it difficult to accept a diagnosis of shock due to infection, in which blood cultures, taken before antibiotics are started, are negative." ★★★

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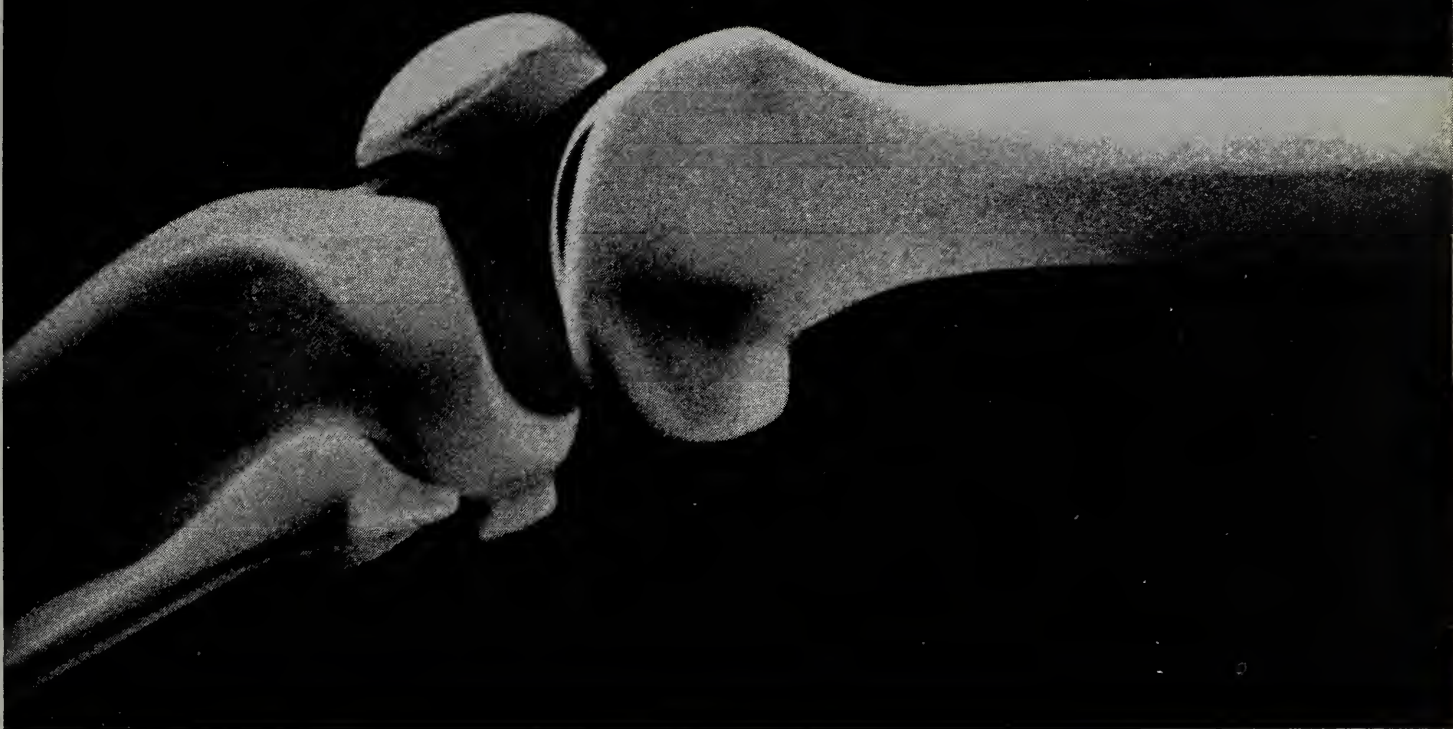
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Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made to guard against blood dyscrasias.

### Adverse Reactions

The most common adverse reactions are nausea, edema and drug rash. Moderately lowered red cell count may sometimes occur due to hemodilution. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vertigo or languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be

attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects.

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A LEARNED PROFESSION is responsible for its own perpetuation in addition to providing a warranty upon its disciples as to ethics and competence. The manner in which its knowledge, special skills, and traditions are handed from one generation to the next is of crucial importance. This is one of the many reasons why the American Medical Association Education and Research Foundation came into existence 15 years ago.

AMA-ERF has grown into a versatile, able institution of service to the American people. Begun to assist in medical education, it continues to place primary emphasis upon this area of service, but it now supports the most unique—and most promising—biomedical research organization in the United States. As the annual appeal to physicians, their wives, and others is again undertaken during the closing weeks of the year, it's a good time to consider what AMA-ERF has done, is doing, and can do. But its future is largely a responsibility of the medical profession.

Many appeals for many worthy causes are made to physicians. Few, however, can boast a better record of results and stewardship than AMA-ERF. Funds distributed to medical schools are free and unencumbered, occasioning some deans to observe that an AMA-ERF dollar can be worth twice as much as an earmarked government dollar. And every penny given goes for AMA-ERF programs, because our AMA dues pay the relatively small costs of the foundation's operating expense.

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## Crisis in Emergency Medical Care: Urgent Need, Massive Challenge

### I

A VAST UPGRADING of emergency medical care is urgently needed in the United States. It is a sad but true fact that a soldier wounded in a Viet Nam jungle usually gets quicker, more comprehensive emergency medical care than an accident victim on the highway at home or a farmer who may be stricken with a heart attack. With hospital emergency room visits up 175 per cent in the past decade and 500 per cent in 20 years, overall services and facilities are woefully inadequate.

These are not idle statements, casually gathered for support of a nebulous and irresponsible charge. Neither are they the theses of some dissident faction which is out to give physicians, hospitals, and allied professional personnel a first class skinning. These are the conclusions of the American Medical Association.

Acting on a recommendation of the Board of Trustees on the crisis in emergency medical care in the United States, AMA is assembling a panel of experts to plan a national conference next year on what must be done to achieve the needed upgrading.

Nor is the AMA alone or necessarily first in this endeavor. The American College of Surgeons has been pouring its vast resources into this same

area of concern with its trauma program. The College will be a valued partner in this project.

### II

The AMA planning project foresees four principal areas for study:

—Ambulance service and the training of ambulance personnel.

—The operation, staffing, and equipping of hospital emergency facilities.

—Improved medical education in emergency procedures.

—Further research into the causes and prevention of medical emergencies, whether the result of accident or disease.

So there is no single problem but rather a complex of problems which makes up the crisis in emergency medical care. It is postulated that the crisis results from many factors, including poor planning, lack of incentives, and relegation by default of emergency medical service as a sidelight rather than as a vital function in overall medical care. Sometimes, somewhere, there is just plain indifference.

Dr. Richard F. Manegold, director of AMA's Department of Hospitals and Medical Facilities, says that "our less than adequate state of emergency care indicates that it may spring from a fragmented, haphazard approach." He charges

## EDITORIALS / Continued

that "because a man has a driver's license doesn't mean that he is competent to drive an ambulance." After all, Dr. Manegold observes, "he's not delivering goods, like a laundry man, but sick and injured people."

### III

Whatever the assessment of this aspect of medical care and however lacking it may be, a strong qualification must be made. In many communities, emergency service *is* measuring up to public need and reflecting the highest sense of responsibility by all members of the health care team. Hospitals have constructed facilities designed to meet local requirements, not on some vague concept that the emergency room should be related to the size or number of beds.

Many such facilities are well staffed, properly equipped, and intelligently managed. A considerable number of hospitals recognize that not all such institutions—even those of comparable size—would find it desirable or necessary to have the same sort of emergency care facilities. For example, with 70 per cent of all automobile fatalities occurring in communities of less than 2,500 population, a strong case may be made for more and better emergency room facilities equipped to care for trauma patients in the smaller hospitals.

Then there is the problem of misuse of emergency room facilities. Some patients consider the hospital room as convenient, all-hour outpatient clinics where a cold, sore throat, or headache can be cared for on the way home from a football game. Such misuse of emergency rooms must reduce their efficiency and impair their capability for their primary purpose of caring for the acutely injured and ill. Nor should patients look to a hospital for routine, nonemergency care: A hospital is not licensed to practice medicine nor should it undertake such responsibilities.

### IV

Training for emergency medical service is overlooked in some internship programs, AMA spokesmen say. The charge revolves not so much around a lack of basic medical knowledge as it does over technique and procedure. Dr. Manegold says that some physicians enter practice without ever having worked in an emergency room.

Staffing of emergency rooms is another problem resulting in consequences just as deleterious to good care as an ambulance driver who doesn't know how to apply a tourniquet. With the growth of medical facilities, increased demands upon

physicians, and the mushroom phenomenon of urbanization, some hospital emergency rooms are inadequately staffed. At the June 1966 annual convention, AMA's House of Delegates approved a model plan for emergency room staffing by contract between a hospital and groups of physicians.

And, as with almost every medical problem, there is the ultimate of health education. So it is also true that public education in the prevention of medical emergencies to the extent possible, the proper use of hospital emergency facilities, and the matter of added public support for the construction and maintenance of such facilities remains a challenge.

In the one nation where superb health care is more easily available than a postage stamp—many emergencies excluded—there must also be the capacity to unify existing potential into an exemplary whole. We can and we will.—R.B.K.

## IRS Clears Up a Tax Fog

Many nonprofit organizations have fared badly in recent years with federal tax authorities over "unrelated income." Generally speaking, such income is money earned by the organization, say from sale of services or convention exhibit space where the primary purpose was the sale of goods to the organization's members. "Related income" is, of course, dues receipts.

The Internal Revenue Code of 1954 provides tax exemptions for those nonprofit organizations





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meeting stated qualifications. For example, there are exemptions granted associations whose activity is charitable, purely and exclusively scientific, or educational. Ordinarily, a medical organization must qualify for tax exemption as a "business league," such as a chamber of commerce. Some have gotten in dutch with IRS over unrelated income, and they have been forced to pay taxes. A recent example is the Massachusetts Medical Society which owns and publishes the *New England Journal of Medicine*, an obviously lucrative enterprise. The society was taxed on almost a half a million dollars, but has been able to recover.

Much concern has been expressed over funds accruing to medical societies from poliomyelitis vaccine campaigns, and many have felt that the funds should be promptly given to some worthy cause as much for tax purposes as for the fulfillment of public stewardship.

A new ruling by the Internal Revenue Service clarifies this question, specifically as relates to immunization campaigns. In the ruling which is styled Revenue Ruling 66-222, Aug. 8, 1966, IRS held that a veterinary medical association which operated an annual rabies clinic "is performing a service to the public which is *related* to and in furtherance of its purposes as a professional organization" even though fees from this service "constitute its sole source of income."

It was held that the veterinary association was not only tax-exempt but that income from the rabies clinic would not be taxable as unrelated income.

Although any local medical society is wise to consult legal counsel in planning public immunization campaigns where receipts are likely to exceed expenses, the IRS ruling clears up a tax fog which has too long obscured such undertakings.—R.B.K.

## Let's Get Medical Costs in Perspective

The price of a color television set, for which many an American is in hock, concerns the economist not one whit in comparison with the cost of health services. In fact, there is a great gnashing of teeth and renting of academic clothing over the price levels of medical care. The economists are quick to observe that health care costs have risen 22 per cent from the present economic base line level in 1957-59. Whether health ser-

vices are expensive or not is a relative matter, but anything worth having costs money.

President Johnson has ordered an investigation of what his statisticians say is a 3 per cent increase in physicians' fees during 1966. The hospital care cost dilemma is one of concern to all. Generally speaking, the price of drugs is going down. And the total amount expended for all health services is, quite naturally, going up as more people purchase them.

The Health Insurance Institute reports a total private health care expenditure of \$28 billion in the United States during 1965, the most recent period for which reliable data are available. This is less than 4 per cent of the gross national product.

As individual Americans, we spend about \$145 per capita on these services. This was about 6 per cent of our disposable income, a quaint phrase meaning what we have left to live on after the array of tax collectors has come and gone.

Of the \$28 billion, the largest share went for hospital care, some \$8.4 billion, and this share is steadily and inexorably rising. With the advent of the new \$1.60 minimum wage law and its extension to cover 1.5 million hospital employees, much greater increases are certain to occur. There was a 7 per cent increase in hospital care costs in



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**IN BRIEF: ACTION AND USES:** A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

**COMPOSITION:** Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

**ADMINISTRATION AND DOSAGE:** Dosage, based upon body weight and Gm. Hb/100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. Initial test doses are advisable. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

**SIDE EFFECTS:** Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylatoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache and fever have occasionally been reported.

**PRECAUTIONS:** If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

**CONTRAINDICATIONS:** Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only it is contraindicated in other anemias.

**CARCINOGENICITY POTENTIAL:** Using relatively massive doses. Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

**SUPPLIED:** 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

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1965, about par for a year, since this rate has varied from 4 to 12 per cent annually for nearly two decades.

In 1965, the mean per diem hospital cost was \$44.48 with a high of \$56.26 on the West Coast and in Alaska. The low mean was \$37.29 in the South Central states, including Mississippi. But the mean is misleading and probably is on the low side.

Physicians' services came to \$7.8 billion, while the outlay for drugs was \$5.8 billion. The remainder went for dental services, nursing care, appliances, and the host of allied professional services which are purchased.

Taken out of context, medical care costs can be made to look awesome. Especially is this true where costs fall heavily upon individuals with major illness. But 4 per cent of the gross national product and 6 per cent of disposable personal income are neither awesome nor usurious. As with anything else, it's perspective that counts—R.B.K.



THERESA L. R. BUCKLEY of Biloxi has announced the relocation of her offices at 1160 W. Howard Ave. where she will continue her practice limited to ophthalmology.

JACK B. CAMPBELL of Jackson has removed his offices to Suite 222 in the new Hinds Professional Building at 1815 Hospital Drive. His practice is limited to general surgery.

EDMUND H. CRANE, JR., of Handsboro, whose practice is limited to internal medicine, has announced the removal of his offices to 450 Pass Road at Handsboro.

WALTER W. CRAWFORD of Tylertown has been recognized by Rotary International for 25 years of continuous membership. The District Governor presented him and four fellow Rotarians with quarter century membership cards in recent ceremonies.

OSMOND D. DABBS, JR., of Gulfport has been elected chief of staff of the Memorial Hospital at Gulfport. WILLIAM D. ATCHISON was renamed vice chief of staff, and O. C. RAINES, III, was elected secretary. Both are from Gulfport.

ROME T. DABBS of Aberdeen is completing construction on his new clinic building on S. Chestnut St. near the hospital.

A. LEWIS FARR of Greenville recently addressed members of the District Three Heart Association during a meeting at the Greenville Country Club.

REXEL GOODMAN was elected mayor of Cary in the recent special election called to fill the vacancy left by the death of Mayor Sam Cannon. Dr. Goodman has served on the Cary Board of Aldermen and has been acting mayor since Cannon's death.

KARL B. HORN has been elected to the Board of Directors of the Moss Point Chamber of Commerce. Current projects of the chamber are programs in water and air pollution control and in city beautification.

W. B. HUNT and ROBERT B. TOWNES, JR., of Grenada have announced the association of W. JOSEPH BURNETT in the general practice of medicine at 1196 Mound St.

THOMAS S. MARTIN has been appointed Director of Student Health Services at the University of Southern Mississippi in Hattiesburg. Formerly of Indianola where he served as director of the county health department, Dr. Martin received his M.D. degree from the University of Mississippi School of Medicine and his postgraduate training at the Mississippi Baptist Hospital.

SAMUEL O. MASSEY, JR., has been elected a director in the Picayune Chamber of Commerce.

DAVID W. MCLEAN of Laurel has announced the opening of his offices at 432 S. 13th Ave. for the general practice of medicine.

EUGENE M. MURPHY, III, of Tupelo has announced the association of WILLIAM L. WOOD, JR., in practice limited to internal medicine.

DAVID A. RATLIFF of Columbia has announced his retirement after 58 years of active practice. He was graduated from the Tulane University School of Medicine in 1907 and is both a member of the 50 Year Club and an Emeritus member of the state medical association.

CHARLES W. TAINTOR, III, formerly of Webb, has announced his association with the Charleston Clinic in Charleston. Also returning to practice in the clinic is ALEXANDER W. HULETT who has been on extended leave following illness.

REGINALD P. WHITE of Meridian, director of the East Mississippi State Hospital, was the keynote



**SAVES  
LIVES  
SAVES  
MONEY  
WASTES  
WATER**



METAHYDRIN (trichlormethiazide) is prescribed by physicians because it not only approximates the diuretic efficacy of parenteral meralluride injection . . . but, *it is the least expensive of all "brand-name" thiazides.* Therefore, when you prescribe METAHYDRIN (trichlormethiazide) your patients receive the thiazide diuretic that removes a little more salt and water than earlier thiazides, with relatively less loss of potassium . . . and, it's therapy they can more easily afford . . . *only pennies a day.*

## **METAHYDRIN<sup>®</sup>** (trichlormethiazide) oral diuretic

**Dosage:** One 2 or 4 mg. tablet once or twice daily.

**Precautions:** As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

**Side Effects:** Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have occasionally been noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by the administration of thiazides.

**Contraindications:** Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

**How Supplied:** Bottles of 100 and 1000 tablets.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201



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# State Morbidity Reported Through September 30

speaker at the recent Meridian Secretarial Institute. The meeting was jointly sponsored by the Meridian Chapter of the National Secretaries Association and the University of Mississippi.



## NEW MEMBERS

The following physician has been elected to membership by his respective component medical society in the Mississippi State Medical Association and the American Medical Association:

BROWN, RUFUS MILTON, Pontotoc. Born Houka, Miss., May 14, 1932; M.D., University of Tennessee College of Medicine, Memphis, 1961; interned St. Joseph Hospital, Memphis, Tenn.; elected June 1, 1966, by Northeast Mississippi Medical Society.



## DEATHS

HOWELL, JOEL WALTER, Durant. M.D., University of Tennessee College of Medicine, Memphis, 1909; interned St. Joseph Hospital, Memphis, Tenn.; awarded a Fifty Year Certificate from the University of Tennessee College of Medicine, Memphis; Emeritus member of MSMA and member of the MSMA Fifty Year Club; died Sept. 10, 1966, aged 83.

KITRELL, JOHN ROBERT, Laurel. M.D., University of Tennessee College of Medicine, Memphis, 1895; received the Golden T award from the University of Tennessee College of Medicine, Memphis, for fifty years of medical practice; Emeritus member of MSMA and member of the MSMA Fifty Year Club; died Sept. 22, 1966, aged 99.

MITCHELL, CHARLES FRANKLIN, Brandon. M.D., University of Mississippi School of Medicine, Jackson, 1957; interned Mobile County Hospital, Ala., one year; died Sept. 4, 1966, aged 41.

PATRICK, BERNARD, Corinth. M.D., University of Tennessee College of Medicine, Memphis, 1933; died Aug. 30, 1966, aged 73.

The Mississippi State Board of Health reports the following occurrence of morbidity for 1966 through the 39th week of the year, ending Sept. 30. Case totals are shown opposite the disease condition.

Tuberculosis, pul. ....	672
Tuberculosis, O.F. ....	41
Dysentery, bac. ....	70
Dysentery, amebic ....	6
Salmonella, inf. ....	29
Brucellosis ....	13
Diphtheria ....	5
Meningitis, men. ....	19
Meningitis, O.F. ....	79
Mononucleosis, inf. ....	28
Myelitis ....	6
Encephalitis, inf. ....	13
Hepatitis, inf. ....	255
Meningococcemia ....	4
Helminthic infections	
Hookworm ....	721
Ascariasis ....	364
Strongyloides ....	67
Taeniasis ....	19
Streptococcus infections	
Strep throat ....	2,968
Scarlet fever ....	41
Mumps ....	277
Measles ....	1,003
Influenza ....	808
Chickenpox ....	229
Toxoplasmosis ....	1
Tularemia ....	4
Coccidiomycosis ....	1
Histoplasmosis ....	5
Polyneuritis ....	1
Rheumatic fever ....	4
Septicemia of the newborn ....	5
Syphilis	
Early ....	533
Late ....	110
Gonorrhea ....	3,548
Rabies in animals	
Bats ....	20





## Book Reviews

**CURRENT THERAPY.** 1966. Edited by Howard F. Conn, M.D. 857 pages. Philadelphia: W. B. Saunders Company, 1966. Price \$13.00.

CURRENT THERAPY is a "veteran of the league." This volume numbers eighteenth in an annual series devoted to the task of bringing concise information on current therapeutic methods to the practicing physician.

The book is divided into sixteen sections. Each major system of the body has a section devoted to its problems. Other sections include: Infectious Diseases, Venereal Diseases, Metabolic Diseases and Physical and Chemical Injuries. Each disease under these broad headings is described and the method of treatment, both the traditional method and others proved effective, is outlined. Some procedures or drugs currently being investigated are described, but these newer methods are not advocated for general use until they can be accepted as standard treatment.

Each new year the publisher presents a new edition of CURRENT THERAPY rather than a revision of the old. In most cases new contributors are used. The result is a well-balanced, well-written treatise on the management of disease. This annual concise reference has proved its worth with long-continued use by practicing physicians on this continent and in other English speaking lands.

WILLIAM H. ANDERSON, M.D.

**The Cell.** By Don W. Fawcett, M.D., Hersey Professor of Anatomy, Harvard Medical School. 448 pages with illustrations. Philadelphia: W. B. Saunders Company, 1966. \$11.00.

This book could hardly be more accurately titled than it is. Being, in fact, a collection of some 240 beautifully reproduced photographs with pertinent explanatory texts, this atlas serves precisely the function which any atlas should serve in its field. Most of the photographic reproduc-

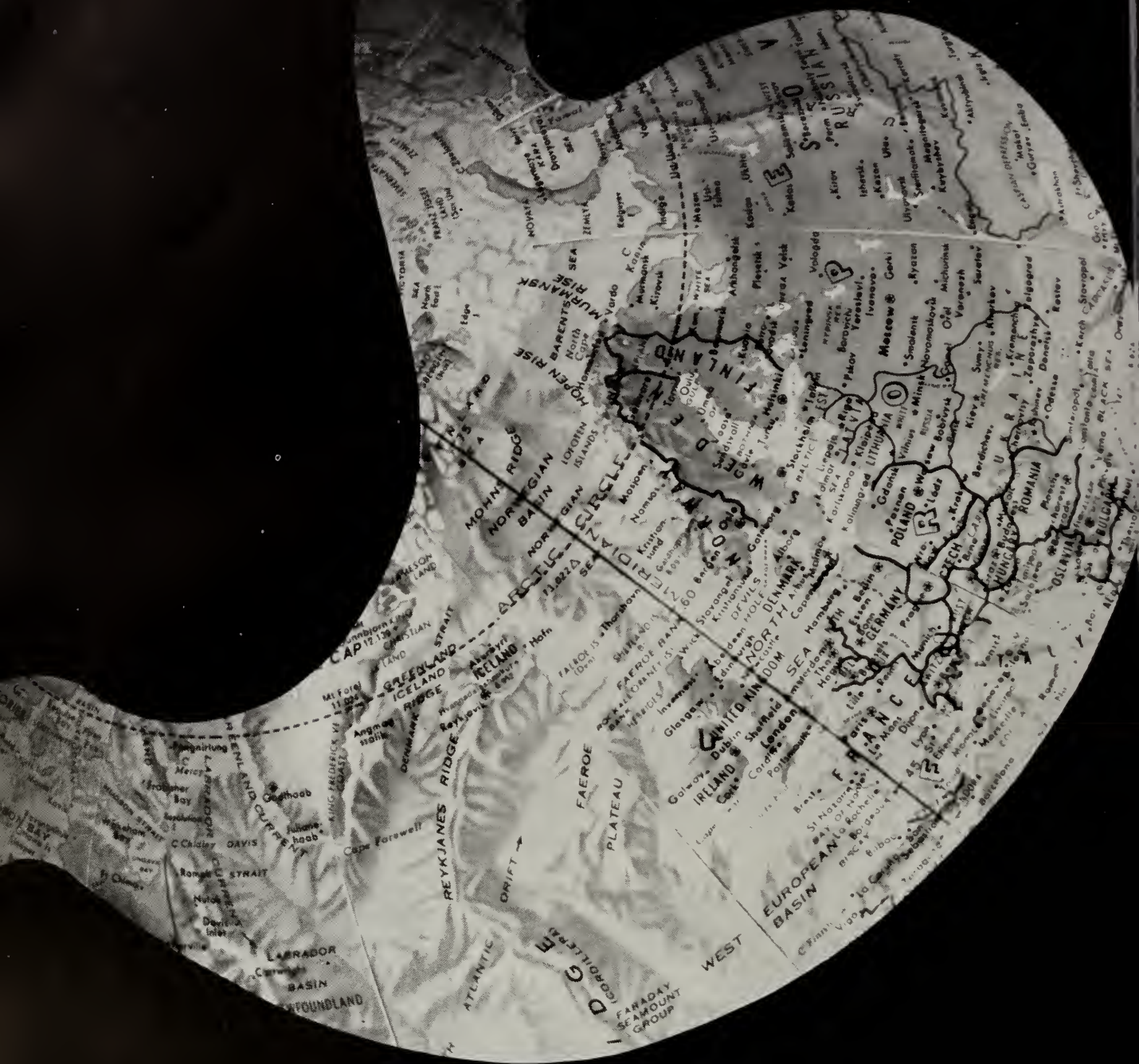
tions are of full page size with only a rare one being less than half page in size. Explanatory text is arranged on facing pages, and the visual impression on leafing through the book is one of extremely good organization.

Deserving high praise are the clarity and overall quality of the atlas illustrations. The electron microscope photographs are initially quite obviously of the highest quality while their reproduction in this book is absolutely top grade. One not familiar with the use of the electron microscope might possibly expect color in illustrations, but this particular book serves to emphasize the detail and marvelous delineation which is possible through good black and white visualization. The publisher of the book maintains that paper for the printing was especially selected for high fidelity reproduction, and it is easy to believe that this must have been the case.

Over-all organization is divided into three parts—The Cell Organelles, The Cell Inclusions, and the Cell Surface. In each section the various structures are introduced with meaningfully brief textual discussions of structure and function followed by the picturization of these. It should be noted also that the organization of explanatory comments about the illustrations on facing pages permits a completely uncluttered appearance in the reproductions of the electron micrographs.

To quote from the publisher, "This volume is unsurpassed as a guide for the student, research scientist and physician who must acquire skill in interpreting electron micrographs if he is to understand the current literature in cell biology, histology and pathology." This reviewer concurs wholeheartedly in such an assessment and can only express a profound regret that the appeal of such a magnificent atlas cannot be more wide than it undoubtedly will be. If only a higher percentage of medical publications with a more general appeal were done as thoroughly and beautifully as this, how much more pleasant would be the increasingly difficult task of attempting to "keep up" with today's literature.

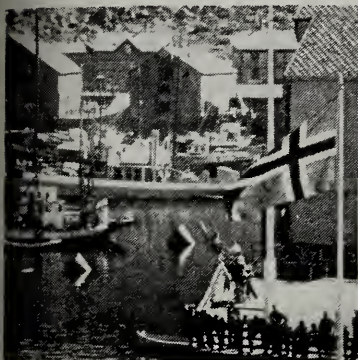
LAWSON C. COSTLEY, M.D.



# The “Socio- geographic” mystery



# Why is one man's gastric ulcer another man's duodenal?



**Geographic variation** in the *incidence* of peptic ulcer is a familiar fact. But the proclivity of certain *kinds* of ulcer for certain geographic areas is a recently recognized phenomenon.<sup>1,2</sup>

For example, in one particular Norwegian fishing village there is a tendency for patients to develop a gastric ulcer; anywhere else in Norway, ulcers are usually duodenal. Peruvians high in the Andes have more gastric ulcers than their compatriots in the lowlands. Why? Nobody knows.

**Social variations, too.** Even in the same geographic areas there are interesting variations. An Englishman's ulcer depends on his social standing—professional men suffer with duodenal ulcers, while workingmen have more of the gastric variety. In southern India the pattern is reversed. Here, duodenal ulcers are common among laborers and agricultural workers and rare among the upper classes.

Investigators are exploring every possible theoretical avenue in their search for the cause of peptic ulcer. Of all the factors implicated in ulcerogenesis, the one that is generally acknowledged to be of primary importance is hypersecretion of gastric acid.<sup>3-8</sup> Or, as one author states it: "The medical management of peptic ulcer pharmacologically is, in the final analysis, concerned largely with the effective inhibition of peptic activity."<sup>3</sup>

Robinul (glycopyrrolate) provides potent, rapid, specific antisecretory action confirmed by gastric analyses and x-ray evidence of clinical effectiveness.<sup>3,7,9-12</sup> Relieves pain with "impressive" promptness.<sup>8</sup> Quickly alleviates acute discomfort, and effectively counteracts gnawing pain, preprandial midepigastic pain, belching and other ulcer symptoms.<sup>7</sup> Suppression of nocturnal pain is "outstanding."<sup>13</sup> Maximally effective doses may be given with minimal side reactions, and the incidence of unwanted anticholinergic effects is negligible.<sup>3,7-14</sup>

no matter what the ulcer theory...the fact is that

# Robinul<sup>®</sup>

(glycopyrrolate)

## promotes the essential ulcer-healing environment

A-H-ROBINS

(brief summary follows)

# Robinul® (glycopyrrolate)

**promotes the  
essential ulcer-healing  
environment**

**Indications:** In addition to its primary indications for duodenal and gastric ulcer, Robinul (glycopyrrolate) is indicated for other GI conditions that may benefit from anticholinergic therapy. Robinul-PH Forte (glycopyrrolate 2 mg. with phenobarbital) is indicated when these situations are complicated by mild anxiety and tension.

**Contraindications:** Glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric retention, prostatic hypertrophy, duodenal obstruction, cardiospasm (megaesophagus), and achalasia of the esophagus, and in the case of Robinul-PH Forte, sensitivity to phenobarbital.

**Precautions:** Administer with caution in the presence of incipient glaucoma.

**Adverse Reactions:** Dryness of the mouth, blurred vision, urinary difficulties, and constipation are rarely troublesome and may generally be controlled by reduction of dosage. Other side effects associated with the use of anticholinergic drugs include tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsiness, and rash.

**Dosage:** Dosage should be adjusted according to individual patient response. Average and maximum recommended dose is 1 tablet 3 times a day: in the a.m., early p.m., and at bedtime. *See product literature for full prescribing information.*

**Supply:** Robinul (glycopyrrolate 1 mg.); Robinul Forte (glycopyrrolate 2 mg.); Robinul-PH (glycopyrrolate 1 mg.) with phenobarbital 16.2 mg. (Warning: May be habit-forming); Robinul-PH Forte (glycopyrrolate 2 mg.) with phenobarbital 16.2 mg. (Warning: May be habit-forming.) In bottles of 100 and 500 scored tablets.

**References:** 1. Jones, F. A., and Gummer, J. W. P.: *Clinical gastroenterology*, Springfield, Ill., Charles C Thomas, 1960, pp. 322-3. 2. Bockus, H. L.: *Gastroenterology*, 2nd ed., vol. I, Philadelphia, Saunders, 1963, p. 468. 3. Sun, D. C. H.: *Ann NY Acad Sci* 99:153 (Feb. 28) 1962. 4. Moore, V. A.: *Postgrad Med* 38:216 (Sept.) 1965. 5. Dragstedt, L. R., Woodward, E. R., Storer, E. H., Oberhelman, H. A., Jr., and Smith, C. A.: *Ann Surg* 132:626 (Oct.) 1950. 6. Posey, E. L., Jr., Smith, P., Turner, C., and Aldridge, J.: *Amer J Dig Dis* 10:399 (May) 1965. 7. Lamphier, T. A., Siegel, L., and Goldberg, R. I.: *Amer J Gastroent* 37:551 (May) 1962. 8. Kasich, A. M., and Fein, H. D.: *Ibid* 39:61 (Jan.) 1963. 9. Epstein, J. H.: *Ibid* 37:295 (Mar.) 1962. 10. Moeller, H. C.: *Ann NY Acad Sci* 99:158 (Feb. 28) 1962. 11. Slinger, A.: *J New Drugs* 2:215 (Jul.-Aug.) 1962. 12. Barman, M. L., and Larson, R. K.: *Amer J Med Sci* 246:325 (Sept.) 1963. 13. Shutkin, M. W.: *Amer J Gastroent* 38:682 (Dec.) 1962. 14. Flesher, B.: *J New Drugs* 2:211 (Jul.-Aug.) 1962. **A. H. ROBINS CO., INC.**  
Richmond, Virginia

## Books Received

JOURNAL MSMA has received the following books for review. Selections will be made for more extensive reviews in the interest of readers and as space permits. Further information on the books listed will be furnished on request. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

**Hematologic Problems in the Newborn.** By Frank A. Oski, M.D., and J. Lawrence Naiman, M.D. 294 pages with illustrations. Philadelphia: W. B. Saunders Company, 1966. \$11.00.

**The New Way to Live With Diabetes.** By Charles Weller, M.D. and Brian R. Boylan. 133 pages. New York: Doubleday and Company, 1966. \$3.95.

**Modern Home Remedies and How to Use Them.** By Morris Fishbein, M.D. 129 pages. New York: Doubleday and Company, 1966. \$3.95.

**Encyclopedia for Medical Assistants.** By Louis Brachman, M.D., Associate Clinical Professor, Marquette University School of Medicine. 448 pages with illustrations. Milwaukee: Cathedral Square Publishing Company, 1966. \$14.95.

**Emergency Care.** By The Committee on Trauma, American College of Surgeons. 128 pages with illustrations. Philadelphia: W. B. Saunders and Company, 1966. \$2.00.

**Synopsis of Neurology.** Second Edition. By Francil M. Forster, M.D., Professor and Chairman, Department of Neurology, University of Wisconsin School of Medicine. 218 pages. St. Louis: The C. V. Mosby Company, 1966. \$7.50.

## Delta Society Meets at Greenville

Dr. I. J. Newton of Greenville was inaugurated president of the Delta Medical Society at the group's 86th Semi-annual Meeting in Greenville. Named president-elect was Dr. J. Weldon Lamb of Greenwood.

Dr. Howard A. Nelson of Greenwood was re-elected secretary-treasurer to begin his 18th year of service in that office. Dr. Clyde Smith of Greenwood was named vice president for Leflore County.

The meeting was highlighted by the day-long scientific program. Evening social activities included a dinner party and dance at the Greenville Country Club.





# AAGP Names Dr. Lotterhos to Board of Directors at Boston Annual Meeting

The 104 member Congress of Delegates of the American Academy of General Practice unanimously named Dr. William E. Lotterhos of Jackson to the organization's Board of Directors. The action came at Boston as the second largest medical association in the United States conducted its 20th Annual Meeting.

Dr. Lotterhos' election to the nine member governing body, a counterpart to the AMA Board of Trustees, marks the first time a Mississippian has been named to such high office. Dr. John B. Howell, Jr., of Canton, a member of the Congress of Delegates, made the nomination.

Other state physicians attending the meeting included Drs. Max L. Pharr of Jackson, president of the Mississippi Academy of General Prac-

Delegates considered 200 pages of Board, commission, and committee reports and a heavy agenda of resolutions. Dr. Howell, who is also chairman of the state medical association's Board of Trustees, served as a member of the Reference Committee on Hospitals.



*This high level conference includes, from the left, Dr. Francis L. Land, AAGP vice president and new chief medical consultant to HEW on Title XIX; Dr. Michael Drury of Bromsgrove, England, guest speaker; and Dr. John B. Howell, Jr., Mississippi delegate.*



*Mississippians all at the AAGP meeting, but not all physicians: From the left, MAGP President Max L. Pharr, President-elect Eldon L. Bolton, Board member William E. Lotterhos, and Capt. Gus Lotterhos, USN, Boston-based brother of the state physician.*

tice; Eldon L. Bolton of Biloxi, president-elect of the state group; J. Roy Bane of Jackson, alternate delegate; and A. T. Tatum of Petal. All were accompanied by their wives.

The scientific assembly, the first major medical body to convene in Boston's new auditorium, was opened by Dr. Amos N. Johnson of Garland, N. C., 1965-66 Academy president. The varied and impressive program continued during sessions over four days.

The scientific and technical exhibit was presented in the auditorium which adjoins the new Sheraton Boston Hotel, headquarters for the meet. Scientific exhibits numbered 122 representing 17 specialty areas of interest. Dr. George Rowland of Millville, Pa., exhibit chairman, said that nearly 250 applications for space were received. Technical exhibits were presented by all major pharma-

only one in the morning 

and one in the evening 



# Now b.i.d. convenience plus even greater patient savings over q.i.d. tetracycline therapy

( plus all the advantages of  
tetracycline phosphate complex )

## new Tetrex® bidCAPS\* (tetracycline phosphate complex)

**Maximum patient savings.** New bidCAPS now enable you to prescribe tetracycline in an even more economical, more convenient form. Your patient's prescription dollar gets maximum value: a daily bidCAPS dose is priced lower than any other leading brand of tetracycline—b.i.d. or q.i.d.

**Well tolerated.** Tetrex (tetracycline phosphate complex) is well tolerated. Gastrointestinal side effects are few; photodynamic reactions are extremely rare.

**More of the active antibiotic in the blood.** The basic tetracycline in Tetrex (tetracycline phosphate complex) is less bound to serum protein than is demethylchlortetracycline.<sup>1</sup> Result: Tetrex (tetracycline phosphate complex) provides a higher percentage of active antibiotic in the blood.

Available in bottles of 16 and 50.

**BRISTOL** BRISTOL LABORATORIES  
Division of Bristol-Myers Company  
Syracuse, New York

BRISTOL THERAPEUTIC SUMMARY: For complete information consult Official Package Circular. **Indications:** Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. **Contraindications:** The drug is contraindicated in individuals hypersensitive to tetracycline. **Warnings:** Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood). **Precautions:** Mycotic or bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months. **Adverse Reactions:** Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis and allergic reactions may occur. **Usual Adult Dose:** 500 mg. b.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

Reference: 1. Roberts, C. E., Jr.; Perry, D. M.; Kuharic, H. A., and Kirby, W. M. M.: A. M. A. Arch. Int. Med. 107:204 (Feb.) 1961.

\*bidCAPS is a trademark of Bristol Laboratories, Division of Bristol-Myers Company, for its brands of twice-a-day capsules. Each Tetrex bidCAP contains Tetrex (tetracycline phosphate complex) equivalent to 500 mg. tetracycline HCl activity.



Business, social graces, and words with the statesmen make up an AAGP annual meeting. Top, the Reference Committee on Hospitals hears Michigan's Dr. Silver on hospital staff privileges. Dr. Howell is third from left. Center, it's an all-Mississippi greeting committee: Mrs. Max L. Pharr, Dr. Pharr, Mrs. J. Roy Bane, Dr. Bane, and Dr. Bolton. Bottom, Dr. Lotterhos gets the word from AAGP senior statesman Dr. William A. Sams of North Carolina.



ceutical and service organizations.

Dr. Carroll L. Witten of Louisville, Ky., was inaugurated president during opening ceremonies of the Scientific Assembly. Named president-elect was Dr. George E. Burket, Jr., of Kingsman, Kans.

In addition to Dr. Lotterhos, new Board members included Drs. Lloyd G. Davies of Fryeburg, Me., and Roger N. Chisholm of Denver, Colo.

Dr. John C. Ely of Spokane, Wash., was re-elected speaker of the Congress of Delegates, and Dr. William Hagood of Clover, Va., was renamed to a term as vice speaker.

Dr. Maynard I. Shapiro of Chicago was named vice president of the Academy. The executive director and general counsel is Mac F. Cahal of Kansas City, Mo., where the 30,000 member national association of family physicians is headquartered.

Delegates acted on a number of reports and resolutions pointing up the need for more family physicians. Many were concerned with training curricula and core content of family practice residency programs. The issue of a certifying board for family physicians received consideration in debate.

Resolutions also included matters of legislation, federal funding of education projects, and assurance of hospital staff privileges for family physicians. The treasurer's report, presented by Dr.



*Mrs. John B. Howell, Jr., found a morning moment to visit the U.S.S. Constitution, oldest naval fighting ship still in commission and afloat at the Boston Naval Yard. She is seen against "Old Iron Sides" rigging and ensign.*



*Dr. and Mrs. E. C. Long of Detroit are greeted at the door of the Mississippi hospitality suite by Mrs. William E. Lotterhos and Dr. Lotterhos. Reception featured pecans, fried chicken drumsticks, cotton boll corsages, miniature Stars and Bars, and Confederate money.*

Julius Michaelson of Foley, Ala., reflected a gross operation in Academy finances of more than \$3 million during the past fiscal year. The AAGP

general fund showed a balance sheet of \$1.6 million, while the publications statement relating to operation of *GP*, the organization's hefty journal, totaled up at \$1.5 million.

Delegates took under advisement a proposal to change the organization's name to the American Academy of Family Physicians, a move calculated to beef up both the status and effectiveness of the Academy.

On the social side of the meeting agenda were state chapter receptions, alumni occasions, and the annual Delegates' Dinner. Open to all members was the Third Annual All-Academy Luncheon which preceded the opening of the Scientific Assembly.

The Mississippi delegation entertained with a reception in the state's headquarters suite early in the meeting.

Of all officials of the Congress of Delegates, none received more ribbing over the relation of his name to his duties than the Sergeant-at-Arms, Dr. U. S. Marshall of Roswell, N. Mex.

# When uncontrolled diarrhea brings a call for help



When the diarrhea sufferer has run the gamut of home remedies without success, pleasant-tasting CREMOMYCIN can answer the call for help. It can be counted on to consolidate fluid stools, soothe intestinal inflammation, inhibit enteric pathogens, and detoxify putrefactive materials — usually within a few hours.

CREMOMYCIN combines the bacteriostatic agent, succinylsulfathiazole and neomycin, with the adsorbent and protective demulcents, kaolin and pectin, for comprehensive control of diarrhea.

**INDICATIONS:** Diarrhea.

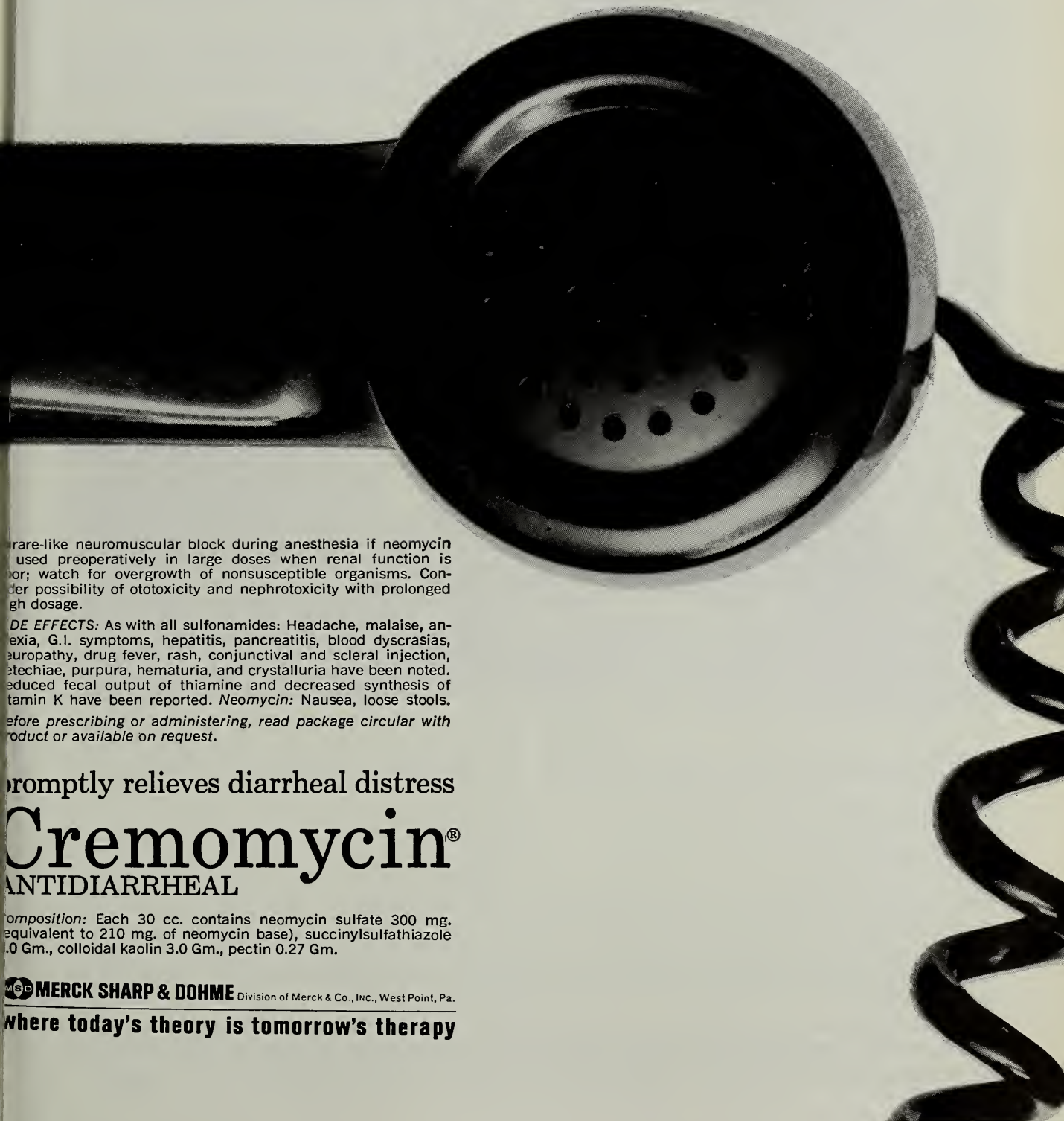
**CONTRAINDICATIONS:** Do not use in intestinal obstruction, extensive ulceration of bowel, or diverticulosis; in hypersensitivity to sulfonamides or neomycin; in pregnancy at term, in premature infants, or during first week of life in the newborn.

**WARNINGS:** Use only after critical appraisal in patients with hepatic or renal damage, urinary obstruction, or blood dyscrasias. Fatal hypersensitivity reactions and blood dyscrasias reported with use of sulfonamides. Consider periodic blood count, hepatic and renal function tests during intermittent or chronic use.

**PRECAUTIONS:** *Succinylsulfathiazole:* Use with caution if there is history of significant allergies and/or asthma. Continued use requires supplementary vitamins B<sub>1</sub> and K. *Neomycin:* Watch for



your Rx for  
**Cremomycin**  
can provide relief



rare-like neuromuscular block during anesthesia if neomycin  
used preoperatively in large doses when renal function is  
poor; watch for overgrowth of nonsusceptible organisms. Con-  
sider possibility of ototoxicity and nephrotoxicity with prolonged  
high dosage.

**DE EFFECTS:** As with all sulfonamides: Headache, malaise, an-  
xemia, G.I. symptoms, hepatitis, pancreatitis, blood dyscrasias,  
neuropathy, drug fever, rash, conjunctival and scleral injection,  
stomatitis, purpura, hematuria, and crystalluria have been noted.  
Reduced fecal output of thiamine and decreased synthesis of  
vitamin K have been reported. *Neomycin:* Nausea, loose stools.  
Before prescribing or administering, read package circular with  
product or available on request.

promptly relieves diarrheal distress

## **Cremomycin<sup>®</sup>**

**ANTIDIARRHEAL**

**Composition:** Each 30 cc. contains neomycin sulfate 300 mg.  
(equivalent to 210 mg. of neomycin base), succinylsulfathiazole  
0.0 Gm., colloidal kaolin 3.0 Gm., pectin 0.27 Gm.

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where today's theory is tomorrow's therapy

# Original Medicare Is Extended to Cover More Outpatient Care, Drugs, Retirees

Newly enacted amendments to the Dependents' Medical Care Act, the original Medicare program, will expand services to dependents of uniformed services personnel and include most retirees. The amendments were signed into law Sept. 30 and first phases became effective Oct. 1.

The Office for Dependents' Medical Care, relocated at Fitzsimons Army Medical Center in Denver from its former Washington site, is developing directives to implement the program. The Mississippi State Medical Association administers professional service aspects of the program in the state and has done so since its original enactment in 1956.

Brig. Gen. Norman E. Peatfield, a career Army physician who is executive director of the program, said that the first phase will be expanded outpatient care for eligible dependents of those on active duty. Formerly limited to care of injuries, management of pregnancy, certain diagnostic procedures, and radiotherapy previously initiated in the hospital, the new outpatient program will cover virtually all phases of care.

The enactment was the product of a Senate-House conference committee and was not aired at public hearings. Thus, no state medical association or national medical group had opportunity to present testimony on it, observers noted.

The new outpatient care will be subject to heavy deductibles for which the patient is responsible. Patients must pay the first \$50 per year for medical services received on an outpatient basis with a limit of two deductibles per military family or \$100. Thereafter, the program will pay 80 per cent with the dependent patient responsible for the remaining 20 per cent of charges.

New outpatient services will include, but not necessarily be limited to, care of medical and surgical conditions, nervous and mental disorders, chronic conditions and diseases, contagious diseases, and bodily injury. Professional services are authorized in the home, office, or outpatient facilities of a hospital.

Also covered will be prescription drugs and insulin, and the pharmacist will present claims for reimbursement based on actual acquisition cost

of the medication plus a flat professional dispensing fee.

No dependent will be required to obtain uniformed service authorization prior to seeking outpatient care from private sources, Gen. Peatfield said.

Proof of payment of deductibles by patients will be given in receipts along with claims for reimbursement. After yearly deductibles are satisfied, claims may be submitted as previously under the program, subject to the 80-20 payment scale.

Effective Jan. 1, 1967, the new program will cover retired uniformed service personnel, care of handicapped dependents, and extended inpatient care for dependents of active duty personnel. Details on aspects of these new services will be available later, Gen. Peatfield added.

Preliminary information on the program has been presented to the State Medicare Review Board, an *ad hoc* committee of the association's Board of Trustees. Members are Drs. Walter H. Simmons, chairman, obstetrics and gynecology member; James R. Cavett, Jr., internal medicine member; Albert L. Meena, surgery member; and William C. Warner, orthopaedic surgery member. All are of Jackson.

The review board advises and assists in the professional aspects of the program and considers physicians' claims and special reports. Purpose of the association's administering the program is to secure maximum possible representation for physicians who render care under it and for their patients.

The original Medicare program furnishes medical and hospital services to eligible dependents of active duty personnel of the Army, Navy, Air Force, Marine Corps, Coast Guard, Public Health Service, and Coast and Geodetic Survey.

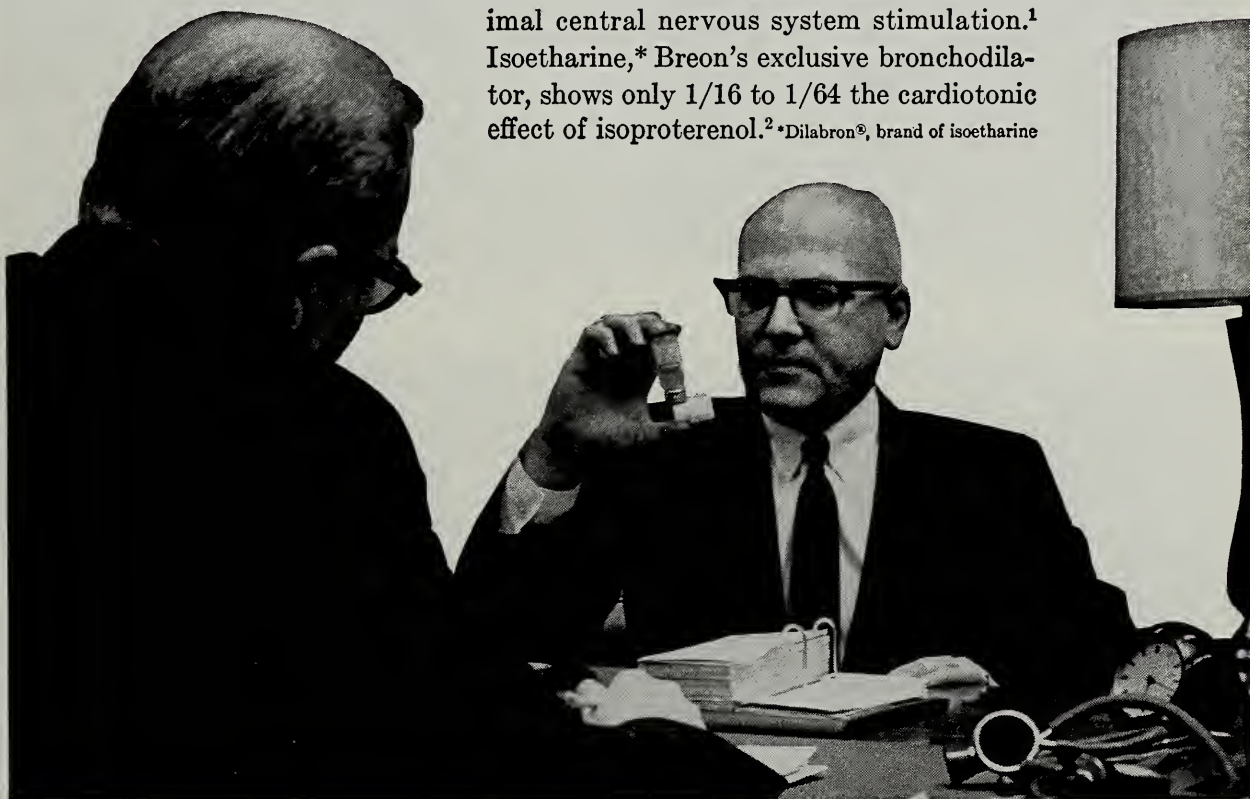
Eligible dependents are spouses and dependent, unmarried children under age 21 unless they are attending an approved institution of higher learning and age under age 23. Under the new amendments, retired personnel and their dependents will also become eligible.

Association spokesmen said that information on the program will be furnished to Mississippi physicians as it becomes available.



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Patients feel relaxed with Bronkometer. Its bronchodilator-decongestant action has minimal central nervous system stimulation.<sup>1</sup> Isoetharine,\* Breon's exclusive bronchodilator, shows only 1/16 to 1/64 the cardiotoxic effect of isoproterenol.<sup>2</sup> \*Dilabron®, brand of isoetharine



## BRONKOMETER<sup>®</sup> ASTHMA, CHRONIC BRONCHITIS, EMPHYSEMA

isoetharine 0.6%; phenylephrine 0.125%; thenyldiamine 0.05%—Superior because it contains isoetharine

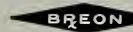
**COMPOSITION:** Bronkometer delivers at the mouthpiece 200 metered doses of: 350 mcg isoetharine methanesulfonate (0.6%); 70 mcg phenylephrine HCl (0.125%); and 30 mcg thenyldiamine HCl (0.05%) with saccharin, menthol and fluorochlorohydrocarbons as inert propellants. Preserved with ascorbic acid 0.1% and alcohol 30%.

**RECOMMENDED DOSAGE:** One or two inhalations with at least one minute between inhalations. Occasionally more may be required, however in most cases, inhalations need not be repeated more than every four hours. Dosage should be adjusted to the severity of the condition and to patient's response.

**PRECAUTIONS:** Bronkometer is unusually free from cardiovascular and other side effects, but the usual precautions associated with sympathomimetic amines should be observed. Bronkometer should not be administered simultaneously with epinephrine or similar compounds because of the possibility of tachycardia, although it may be alternated with these agents. Dosage must be carefully adjusted in patients with hyperthyroidism, hypertension, acute coronary disease, cardiac asthma, limited cardiac reserve and in individuals sensitive to sympathomimetic amines.

**SUPPLIED:** 10 ml pressurized aerosol vials complete with measured dose valve and oral nebulizer.

References: 1. Spielman, A. D.: *Curr. Therap. Res.* 3:235 (June) 1961. 2. Herschfus, J. A.; Bresnick, E.; Levinson, L.; and Segal, M. S.: *Ann. Allergy* 9:769 (Nov.-Dec.) 1951.



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## Dr. Hellems Lectures in African PG Tour

Dr. Harper K. Hellems, professor and chairman of the UMC Department of Medicine, is one of five physicians who lectured in Africa Oct. 7-30 as a member of the 16th traveling faculty of the American College of Cardiology.

The overseas postgraduate program on cardiovascular therapy which makes training available to foreign physicians is sponsored by the Cultural Affairs Department of the U. S. State Department. Now in its fourth year, the international circuit course has brought 13 courses to 38 countries.

Other lecturers are Dr. E. Gray Dimond, Scripps Clinic and Research Foundation, La Jolla, Calif.; Dr. Robert L. Simmons, Howard University, Washington, D. C.; Dr. James E. Crockett, University of Kansas School of Medicine, and Dr. Herman K. Hellerstein, Western Reserve University, Cleveland, Ohio.

## Dr. Wood Wins Top ACS Award

The 1966 Division Award for Distinguished Service of the American Cancer Society was presented to Dr. Frank A. Wood of Jackson during closing ceremonies of the recent annual meeting at Jackson.

Dr. John G. Archer of Greenville was inaugurated president, and Dr. Guy T. Gillespie of Jackson was named president-elect. Other officers are Ralph Hester of Jackson, chairman of the board of directors; and Dr. Warren N. Bell of Jackson, chairman of the executive committee.

Also elected were Charles E. Bailey of Jackson, treasurer; Mrs. Cayce Ellard, Jr., of Kosciusko, secretary; A. Ray Tillman of Jackson, assistant treasurer; and William Farlow of Jackson, central area vice president.

Named northern area vice president was Dr. Arthur E. Brown of Columbus, while Dr. Glen T. Pearson of Hattiesburg was elected southern area vice president. Dr. M. Beckett Howorth of Oxford

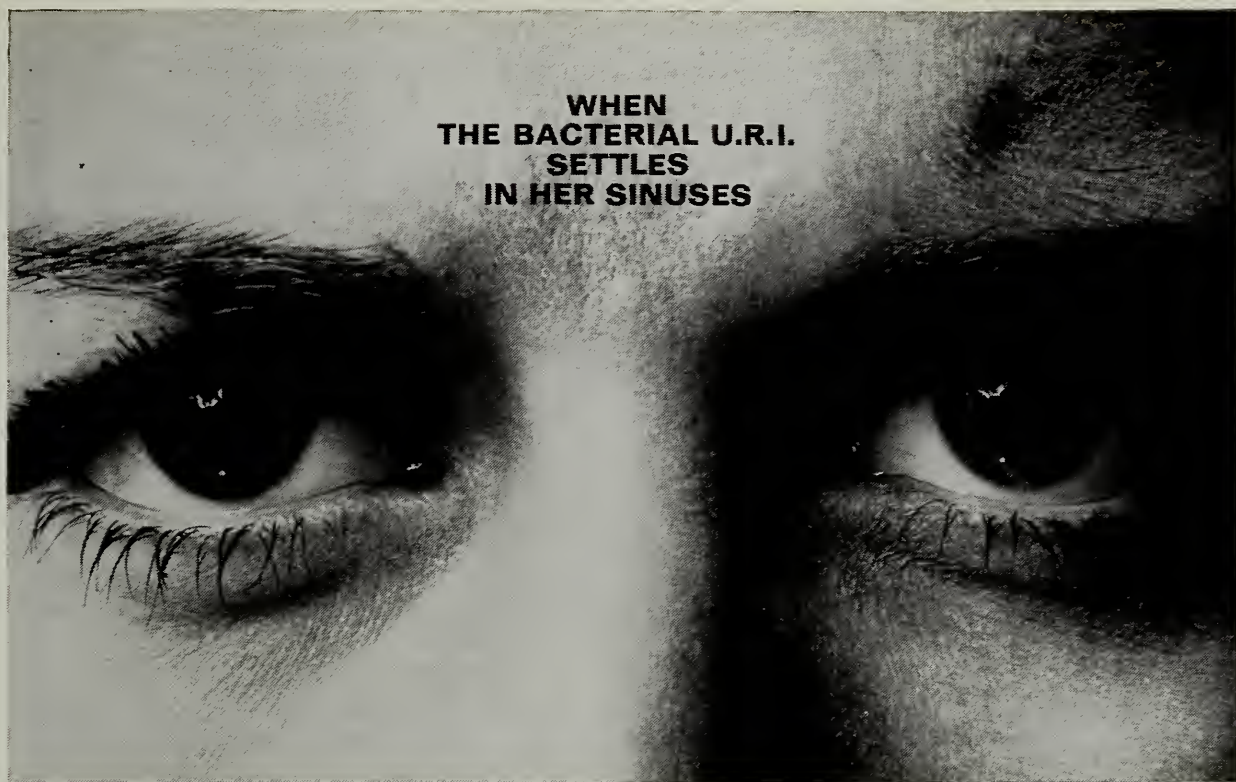


*New officers of the American Cancer Society, Mississippi Division, are, seated from the left, Ralph Hester, Dr. John G. Archer, Dr. Guy T. Gillespie,*

*and Dr. Warren N. Bell. Standing from the left are Charles E. Bailey, Mrs. Cayce Ellard, Jr., A. Ray Tillman, William Farlow, and Dr. Arthur E. Brown.*



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Tetracycline HCl-Antihistamine-Analgesic Compound

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ACHROMYCIN® Tetracycline HCl ..... 125 mg  
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Caffeine ..... 30 mg  
Salicylamide ..... 150 mg  
Chlorothen Citrate ..... 25 mg

The patient can feel better while getting better. ACHROCIDIN brings the treatment together in a single prescription—prompt symptomatic relief together with early, potent control of the tetracycline-sensitive organisms frequently responsible for complications leading to prolonged disability in the susceptible patient.

Effective in controlling complicating tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract.

**Contraindication**—History of hypersensitivity to tetracycline.

**Warning**—If renal impairment exists, even usual doses may lead to liver toxicity. Under such conditions, lower than usual doses are indicated and if therapy is prolonged, tetracycline serum level determination may be advisable. Hypersensitive individuals may develop a photodynamic reaction to natural or artificial sunlight during use. Individuals with a history of photosensitivity reactions should avoid direct exposure while under treatment and treatment should be discontinued at first evidence of skin discomfort.

**Precautions**—Some individuals may experience drowsiness, ano-

rexia, and slight gastric distress. If excessive drowsiness occurs, it may be necessary to increase the interval between doses. Persons on full dosage should not operate any vehicle. Use may result in overgrowth of nonsusceptible organisms. If infections appear during therapy, appropriate measures should be taken. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Infections caused by beta-hemolytic streptococci should be treated for at least 10 full days to help prevent rheumatic fever or acute glomerulonephritis. Use of tetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect has been observed in usual short treatment courses.

**Average adult dosage:** 2 tablets four times daily, given at least one hour before, or two hours after meals.

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## ORGANIZATION / Continued

was named first vice president.

In the citation of Dr. Wood for the Division Award for Distinguished Service, the society called attention to his service as a director since 1953 and in many additional leadership capacities.



*Hal E. Hayward presents the American Cancer Society's Division Award for Distinguished Service to Dr. Frank A. Wood of Jackson.*

For more than 10 years, Dr. Wood served as chairman of the Committee on Cancer Control of the Mississippi State Medical Association. He has also been a member of the House of Delegates.

The presentation of the top ACS award was made by Hal E. Hayward of Jackson, chairman of the Division Awards Committee.

Dr. Wood is a medical graduate of the Vanderbilt University School of Medicine. He received his postgraduate training, including his internship and surgical residency at the Rochester General Hospital, Rochester, N. Y. He served as a medical officer during World War II and is a Fellow in the American College of Surgeons.

## ACS Gets Grant for Trauma Studies

A three-year grant of \$275,000 to the American College of Surgeons has been awarded by The John A. Hartford Foundation, Inc., of New York City for support of the Field Program in Trauma to improve care of the injured patient.

The Board of Regents has accepted the grant to carry out various projects in the education of the public on comprehensive emergency care, including adequate ambulance service and hospital emergency departments for communities. The grant period began Sept. 1, 1966, and will run through Aug. 31, 1969.

This is the third, three-year grant from the Hartford Foundation for the Field Program in Trauma. The first two grants were for \$150,000 each.

Dr. Robert H. Kennedy, New York, director of the program, said that "under the new grant the program's emphasis will be on educating the public and getting its support for the best possible care of the injured person from the time of an accident until definitive treatment is started, and for improvement in the care provided to accident victims in hospitals.

"One of the first projects," said Doctor Kennedy, "will be the production of a film on ambulances and the training of ambulance personnel."

In 1965 a film on "The Emergency Department: Organization and Operation" was produced with funds from the Hartford Foundation grant.

Other important projects carried out during the three years of the second Hartford Foundation grant (1963-66) included a 128-page "Manual on Emergency Care," and correlation of data on ambulance services in the United States and Canada.

The Field Program in Trauma was initiated in 1960 with the first Hartford Foundation grant (1960-63). Its efforts were aimed at improving the care of the patient in the emergency department of the hospital.

In adopting a resolution accepting the 1966-69 grant, the Board of Regents expressed "its sincere appreciation to the Hartford Foundation for its generosity in support of this program."

## U.S. Takes Nobel Prize in Medicine

Two American physicians have won the 1966 Nobel Prize for Medicine. Drs. Peyton Rous of New York and Charles B. Huggins of Chicago will share in the \$60,000 tax-free award.

Dr. Rous was recognized for his discovery of tumor-inducing viruses, while Dr. Huggins was cited for his work concerning hormonal treatment of prostatic cancer. The awardees were selected by the faculty of the Caroline Institute in Stockholm.



## Eight Mississippians Win ACS Fellowship

Eight Mississippi physicians were awarded fellowship in the American College of Surgeons during the annual clinical congress at San Francisco in October.

Receiving the F.A.C.S. degree were Drs. John F. Lucas, Jr., of Greenwood; Joel L. Alvis, Edward M. Lowicki, and O. B. Wooley, Jr., of Jackson; Max L. Golden, John M. McRae, Jr., and John W. Moore of Laurel; and Julius A. S. Bosco of Pascagoula.

With the induction of about 1,350 new fellows at San Francisco, the College now numbers 27,000 in 83 countries. It was founded in 1913 to improve care of the surgical patient and has a proud history of upgrading hospitals.

## New Ophthalmology Society Is Formed

The newest specialty group on the Mississippi medical scene is the Jackson Ophthalmological Society which has conducted its organizational meeting and elected officers.

Dr. Ben McCarthy, Jr., of Jackson was named president, and Dr. Henry P. Mills, Jr., of Jackson has been elected secretary-treasurer.

Purpose of the new group is the advancement of the art and science of medicine as relates to



*Officers of the newly formed Jackson Ophthalmological Society are, from the left, Drs. Henry P. Mills, Jr., secretary-treasurer, and Ben McCarthy, Jr., president.*

ophthalmology, encouragement of the study of the relationship of ophthalmology and other disciplines of medicine, and study of the social and economic problems peculiar to the field of eye care.

Drs. McCarthy and Mills said that the society will meet five times annually on the first Tuesday night in February, April, and June, and on the second Tuesday night in September and November. Scene of the meetings is Primos' Northgate Restaurants, and the time is 6:30 p.m. Interested ophthalmologists and other physicians are invited to address inquiries to the secretary-treasurer.

## Socio-Economics Meet Is Set for Chicago

The effective organization and delivery of health services will be explored at the 1st National Congress on the Socio-Economics of Health Care, Jan. 22-23, 1967 in Chicago.

The Congress, sponsored by the Council on Medical Service and the Division of Socio-Economic Activities of the American Medical Association, will be held at the Palmer House, and will bring together authorities from medicine, health care administration, social science, education, community planning, and other disciplines to report on new issues, developments and techniques in the organization, delivery and financing of health care services.

Dr. George W. Slagle of Battle Creek, Mich., chairman of the council, said the meeting will serve as a national forum for interchange of information and opinion among the many areas of society concerned with this subject.

Through a series of presentations and discussion sessions, conference participants will explore current health status of the population, impact of medical and social changes on patterns of health care, the changing role of the hospital and its medical staff in the community, new methods in training and utilization of health manpower, and financing of health services.

Additional information, including registration details, may be obtained from the Division of Socio-Economic Activities, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.







*Well, Doctor Cunningham, I was just telling Herbert I should talk to you about my cough. It comes from down here and...*

Chances are the symptom recital may prove to be as difficult to control as the cough. If it's the useless, exhausting type of cough that often accompanies respiratory infection or allergy, you can provide prompt relief with Novahistine DH. Its decongestant-antitussive action controls frequency and intensity of cough spasms without abolishing cough reflex. And the fresh, grape flavor of Novahistine DH appeals to children and adults alike.

When your diagnosis is bronchitis, complicated by thick tenacious exudates, Novahistine Expectorant is particularly useful. It not only provides decongestive action and controls the cough, but also encourages expectoration, thus easing bronchial obstruction.

Use with caution in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Ambulatory patients should be advised that drowsiness may result. Continuous dosage over an extended period is contraindicated since codeine phosphate may cause addiction.

Each 5 ml. teaspoonful of Novahistine DH contains codeine phosphate, 10 mg. (Warning: may be habit forming); phenylephrine hydrochloride, 10 mg.; chlorpheniramine maleate, 2 mg.; chloroform (approx.), 13.5 mg.; l-menthol, 1 mg. (Alcohol 5%). Each 5 ml. of Novahistine Expectorant contains the above ingredients and, in addition, glyceryl guaiacolate, 100 mg.

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## UMC Sets PG Meet on Abdominal Surgery

A one-day report on Advances in Abdominal Surgery is slated at the University Medical Center Nov. 18. Planned by the Postgraduate Education Committee and the surgery department, the program will combine lectures and case presentations by 16 full-time and clinical faculty members.

Among other topics, speakers will take up surgical management of duodenal ulcers, chronic pancreatitis, colon diverticulitis, abdominal aorta aneurysms, ureteral injury, visceral arteriography, and reconstructive gynecologic surgery. No registration fee is required. The program follows:

- 8:55 Welcome, Dr. John A. Gronvall
- 9:00 Selective Gastric Vagotomy for Duodenal Ulcer, Dr. W. O. Barnett
- 9:20 Improving Diagnostic Accuracy in Pancreatic Disease, Dr. Leonard Posey
- 9:40 Abdominal Visceral Angiography, Dr. Carlos Chavez
- 10:00 Special Procedures for Successful Resection of Abdominal Aortic Aneurysms, Dr. James D. Hardy
- 10:20 Coffee
- 10:40 Improving the Surgical Management of Colon Diverticulitis, Dr. W. C. Shands
- 11:00 Contrasting Characteristics of Granulomatous and Ulcerative Colitis, Dr. Lidio Mora
- 11:20 Postoperative Hypotension After Abdominal Surgery, Dr. Rush Netterville
- 11:40 Questions and answers
- 12:00 Recess
- 1:00 Artificial Hearts, Dr. T. Akutsu
- 2:00 Case Presentations Illustrating Significant Principles in Abdominal Surgery  
Ruptured Abdominal Aorta Aneurysm, Dr. H. H. Timmis  
Ureteral Injury, Dr. W. L. Weems  
Bleeding Duodenal Ulcer—Oversew or Resect? Dr. W. A. Neely  
Chemotherapy in Advanced Abdominal Cancer, Dr. Edward Lowicki  
Bile Duct Stricture, Dr. Jesse L. Wofford  
Imperforated Anus, Dr. Raymond Martin
- 3:30 Reconstructive Gynecological Surgery, Dr. James Royals

- 3:50 A Practical Plan for the Management of Gastrointestinal Bleeding, Dr. J. C. Griffin
- 4:10 Interesting Electron Microscopic Findings in Abdominal Diseases, Dr. Robert Elliott
- 4:30 Movie: Left Hemicolectomy for Carcinoma of the Left Transverse Colon

## Dr. Barnett Is New UMC Postgraduate Chief

The University of Mississippi School of Medicine has announced a stepped-up series of postgraduate education programs during the 1966-67 season which will total 16, in addition to the 24 session circuit course series in eight cities.

New chairman of the University's committee overseeing the program is Dr. W. O. Barnett of the Department of Surgery.

"Emotions in Medicine" will be the topic of a postgraduate education seminar scheduled for Dec. 8 at the medical center. Dr. William Erwin, assistant professor of psychiatry, will talk on behavioral techniques and the treatment of alcoholism, and a panel discussion on different aspects of psychiatric problems seen by family physicians will be presented.

Panelists will include Drs. Floy J. Moore, professor of psychiatry; L. C. Hanes, associate professor of psychiatry; and Joseph Roberts, assistant professor of psychiatry. Other portions of the program will be devoted to a workshop on doctor-patient relationships. Seminar registrants will see and interview patients and later discuss interview findings.

The ninth year of UMC-sponsored circuit courses will begin this month with Greenwood, Tupelo, and Laurel as the opening host cities. The three-session series will go to five additional cities during the year.

Medical and surgical approaches to renal transplantation will be discussed Nov. 2 at Tupelo and on Nov. 3 at Greenwood with Drs. John Bower and Hilary Timmis as the essayists.

Drs. Blair Batson and Raymond Martin will review acute abdominal emergencies in infants during Nov. 9-10 in the same cities. Tupelo programs are scheduled for the North Mississippi Community Hospital with Dr. Malcolm Moore as local chairman. Dr. Howard A. Nelson is in charge of the series to be presented at the Greenwood LeFlore Hospital.

Drs. Jose Montalvo and Herbert Langford will discuss hypertension in children and adults on Nov. 18 at the Laurel Country Club.



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## ANG Officer Gets AF Medical Posts

Dr Curtis D. Roberts of Brandon has been appointed to two top military medical advisory posts. He is a lieutenant colonel in the Mississippi Air National Guard and commander of the 172nd

USAF Dispensary at Jackson's Thompson Field.



*Col. Roberts*

Col. Roberts has been named to the Air Reserve Forces Medical Advisory Council to the Surgeon General of the U. S. Air Force and to the Air Force Association Advisory Council to the Surgeon General. The former is an official body of the Department of the Air Force.

The Air Reserve Council meets twice annually to consider aerospace medical matters.

Commissioned a 1st lieutenant in 1954, Col. Roberts received successive promotions to his present grade through 1964. Since 1957, he has served as a medical officer and flight surgeon in the Mississippi Air National Guard, both at the Meridian and Jackson bases. He is a graduate of three service schools in aerospace medicine, including the School of Aviation Medicine at Randolph AFB, Texas.

Col. Roberts received his premedical training at Ole Miss and his medical degree from the Northwestern University School of Medicine. He underwent his postgraduate training at Weley Memorial Hospital in Chicago.

## Dr. Beacham Is New ABCD Director

Dr. Aubrey V. Beacham of Magnolia has been appointed director of the Alcoholic Beverage Control Division of the State Tax Commission. He succeeds Earl Evans of Canton who will step into a newly created post of assistant.

The announcement was made in mid-October by Governor Paul B. Johnson who said that Evans had requested the change for reasons of health and heavy duties.

As ABCD director, Dr. Beacham will administer Mississippi's new legal liquor law and direct all activities of the state in its wholesale supply monopoly role.

Governor Johnson said that "Dr. Beacham is recognized as an outstanding leader in Mississippi. His educational background, his progressive and unselfish lifelong record as a physician, a businessman, and civic leader reflect the highest credit on the Tax Commission for its wise choice. I am very grateful to have Dr. Beacham, one of the best businessmen I have ever known, in a position of leadership in this administration."

The new appointee is past president of the Mississippi Hospital Association, Mississippi Academy of General Practice, and American Cancer Society, Mississippi Division. He is a former Trustee of the Mississippi State Medical Association and a current member of the Council on Legislation.

Dr. Beacham received his medical degree from the Tulane University and his postgraduate hospital training at New Orleans. He founded the Beacham Memorial Hospital at Magnolia. He has held many high posts in civic and church organizations.

## 1967 MSMA-Robins Award Program Is Set

The Sixth Annual MSMA-Robins Award for outstanding community service by a Mississippi physician has been announced by the Board of Trustees to component medical societies of the association.



*MSMA-Robins Award*

Drs. James T. Thompson, association president, and John B. Howell, Jr., chairman of the Board of Trustees, said that each component medical society has been invited to submit a nomination for the honor. The award is co-sponsored by the Mississippi State Medical Association and the A. H. Robins Co.

of Richmond, Va., long-established maker of ethical pharmaceuticals.

Nominees must be members of the association, and the community service recognized should be apart from purely professional attainment. Gen-



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nervous disorders . . .**

Hill Crest Hospital was established in 1925 as Hill Crest Sanitarium to provide private psychiatric treatment of nervous or mental disorders. Individual patient care has been the theme during its 41 years of service.

Both male and female pa-

tients are accepted and departmentalized care is provided according to sex and the degree of illness.

In addition to the psychiatric staff, consultants are available in all medical specialties.



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erally, Drs. Thompson and Howell said, the service should have benefitted the local or state community in civic, cultural, or general economic sense. The service need not, however, have been a single achievement, since many outstanding citizens contribute to community betterment through a series of services in varied leadership roles.

Nominations should be made by letter, and there are no restrictions as to length or attached exhibits which assist in establishing the nominee's qualifications. All nominations must be signed by an officer of the sponsoring component medical society.

Deadline for submission of nominations, Drs. Thompson and Howell said, is Jan. 31, 1967. Each nomination will be acknowledged, and the Board of Judges will review the nominations in February.

Previous winners of the high award are Dr. Thomas G. Ross of Jackson, nominated by the Central Medical Society in 1962; Dr. Frank M. Davis of Corinth, by the Northeast Mississippi Medical Society in 1963; Dr. Howard A. Nelson of Greenwood, by the Delta Medical Society in 1964; Dr. Maura J. Mitchell of Ellisville, by the South Mississippi Medical Society in 1965; and Dr. J. T. Davis of Corinth, by the Northeast Mississippi Medical Society in 1966.

The award, a sculptured plaque in *bas* relief, is engraved and mounted on a mahogany panel. The 1967 award will be presented at the 99th Annual Session.

## Bishop Brunini Is on AMA Committee

The Most Rev. Joseph B. Brunini, Bishop of the Diocese of Natchez-Jackson, has been appointed a member of the Committee on Medicine and Religion of the American Medical Association. The invitation to serve was extended by the AMA Board of Trustees.

Bishop Brunini appeared on the pioneer 1963 Seminar on Medicine and Religion presented by the state medical association at Biloxi. He is a past president of the Catholic Hospital Association and maintains an active interest in the health and medical field.

His Excellency will serve on the 20 member body of AMA consisting of equal numbers of physicians and outstanding theologians and religious leaders.

## VA Physicians Are Named to UMC Posts

The University of Mississippi Medical Center has named Dr. Guy Campbell, staff physician at the Veterans Administration Hospital, to a part-time position as clinical associate professor of medicine and director of the Medical Center's activities in connection with the Regional Medical Programs.

Purpose of the new federal program is to make available to patients the latest advances in the treatment of heart disease, cancer and stroke and to foster cooperative research between medical schools, clinical research facilities and hospitals.

Dr. Campbell has served as president of the Mississippi Tuberculosis Association and as counselor of the American Thoracic Society. He is governor of the Mississippi chapter of the American College of Chest Physicians.

A second Veterans Administration Hospital physician, Dr. Lidio Mora, has also been appointed part-time clinical associate professor of medicine and director of the recently expanded division of gastroenterology in the Department of Medicine at the University Medical Center.

The strengthened program will include a gastroenterology clinic, weekly gastroenterology conferences, corresponding increases in research in gastrointestinal diseases and the full spectrum of diagnostic work and therapy. The residency program in gastroenterology will also be expanded.

Dr. Mora, chief of the gastroenterology section at the Veterans Administration Hospital, is a Fellow of the American College of Physicians. He received the M.D. degree from the University of Havana, Cuba. A member of the American Medical Association and the American Gastroenterological Association, Dr. Mora is certified by the American Board of Internal Medicine and the subspecialty Board of Gastroenterology.

## Vegas Is Host to AMA Clinical Conclave

A scientific program especially designed for the physician in practice is scheduled for the 20th Clinical Convention of the American Medical Association at Las Vegas, Nev.

The four-day meeting Nov. 27-30 will include scientific sessions on 18 major topics, three postgraduate courses, breakfast roundtable confer-



# MOLECULAR REMODELING—

## *laboratory exercise or clinical necessity?*

More than twenty-five years have passed since the discovery of the diuretic activity of sulfanilamide started pharmacologists on a succession of molecular remodelings to find the ideal diuretic.

### **Diuresis—a sought-after clinical effect from an unwanted side effect**

It started in 1937 when a clinician reported that the administration of a sulfonamide was sometimes accompanied by an unexplainable side effect—metabolic acidosis.<sup>1</sup> Three years later the side effect was explained. The sulfonamide radical of sulfanilamide inhibited carbonic anhydrase,<sup>2</sup> the enzyme responsible for converting carbon dioxide and water to hydrogen ions and bicarbonate ions.

Later, other investigators showed by dog experiments that metabolic acidosis probably resulted when the inhibition of carbonic anhydrase upset the exchange of hydrogen and sodium ions, causing increased excretion of sodium as the bicarbonate.<sup>3</sup>

It was twelve long years after the first report of the unexplainable side effect (metabolic acidosis) that it was finally shown that large doses of sulfanilamide administered to edematous patients were indeed capable of promoting diuresis.<sup>4</sup> However, the possibility of toxic effects from its prolonged use and its relatively weak diuretic action made it impractical for clinical use as a diuretic.<sup>5</sup>

Because the inhibition of carbonic anhydrase seemed to be the key to effective diuresis, investigators began to look for more potent enzyme inhibitors—in the hopes that they would be more effective diuretics.

The most important of these early compounds, acetazolamide, enjoyed several years of fairly wide clinical use.

Its carbonic anhydrase inhibitory activity was several hundred times greater than that of sulfanilamide.<sup>6</sup> The increase in inhibitory activity, however, increased not only the excretion of sodium and bicarbonate ions, but also the excretion of potassium.<sup>7</sup> And, like its predecessor, acetazolamide precipitated mild acidosis. Its prolonged use could result in hypokalemic acidosis.<sup>7</sup>

### **The 'thiazides'—an answer to the metabolic acidosis caused by carbonic anhydrase inhibition**

Despite the fact that the sulfonamide

group appeared to be responsible for carbonic anhydrase inhibition which in turn appeared to be responsible for diuresis, investigators began to synthesize compounds with structural alterations to the sulfonamide group.

The first major breakthrough came with the synthesis of chlorothiazide. Altering the sulfonamide group did indeed alter the ability of chlorothiazide to inhibit carbonic anhydrase—it was only 1/10th as potent as acetazolamide in inhibiting the enzyme.<sup>8</sup> Despite the drop in inhibitory potency, however, chlorothiazide proved to be an effective diuretic—an observation that led to the conclusion that its diuretic action was due to some mechanism other than its action on carbonic anhydrase.<sup>9,10</sup>

For effective diuresis, chlorothiazide was administered in daily dosages ranging from 250 to 2000 mg.<sup>11</sup> It increased the excretion of sodium and chloride; and, to a lesser extent, potassium and bicarbonate.<sup>11</sup> The excretion of potassium appeared to be maximal at higher dose levels at which, theoretically, the carbonic anhydrase inhibitory effect is more active.<sup>11</sup> Its prolonged use, therefore, could sometimes result in metabolic hypokalemic, hypochloremic alkalosis.<sup>7</sup>

### **Naturetin—effective diuresis with more favorable electrolyte balance**

Other thiazides followed—with improvements being aimed at two particular areas: 1. attempts to increase diuretic action in relation to the milligram potency of the drug, and 2. attempts at a more favorable sodium/potassium ratio in the urine, i.e., to decrease the excretion of potassium while maintaining the excretion of sodium.<sup>12</sup>

One of these, Naturetin, Squibb Bendroflumethiazide, has made advances on both these points. "By adding a 3-benzyl radical to hydroflumethiazide a rather dramatic reduction in dose range is accomplished. With this drug, effective sodium excretion is obtained with

doses between 2.5 and 10 mg., which is a 200 to 1 ratio as compared to chlorothiazide..."<sup>13</sup>

Moreover, due probably to its virtual lack of carbonic anhydrase inhibition, Naturetin (bendroflumethiazide) has been shown to cause less potassium and bicarbonate loss and less alteration in urinary pH than either chlorothiazide or hydrochlorothiazide.

Naturetin is outstandingly effective not only in establishing, but also in maintaining, excretion of retained fluid in edematous patients. And its duration of action is sufficiently prolonged to allow a single daily administration in most patients. Naturetin is also an effective antihypertensive agent.

**Contraindications:** Severe renal impairment; previous hypersensitivity.

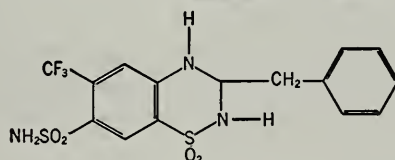
**Warning:** Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting, or G.I. bleeding occur.

**Precautions:** The dosage of ganglionic blocking agents, veratrum, or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Electrolyte disturbances are possible in cirrhotic or digitalized patients.

**Side Effects:** Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, and rashes may occur.

**Supplied:** Naturetin (Squibb Bendroflumethiazide) 5 mg. and 2.5 mg. tablets. Also available Naturetin  $\bar{c}$  K [Squibb Bendroflumethiazide (5 or 2.5 mg.) with Potassium Chloride (500 mg.)]. For full information, see Product Brief.

**References:** 1. Southworth, H.: *Proc. Soc. Exper. Biol. & Med.* 36:58, 1937. 2. Mann, T. and Keilin, D.: *Nature* 146:164, 1940. 3. Pitts, R. F., and Alexander, R. S.: *Am. J. Physiol.* 144:239, 1945. 4. Schwartz, W. B.: *New England J. Med.* 240:173, 1949. 5. Friedberg, C. K., in Moyer, J. H., and Fuchs, M.: *Edema Mechanisms and Management*, Philadelphia, W. B. Saunders Co., 1960, p. 259. 6. Cumming, J. R.; Tabachnick, E., and Seelig, M., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 254. 7. Werko, L., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 188. 8. Beyer, K. H., Jr., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 274. 9. Maren, T. H., and Wiley, C. E.: *J. Pharmacol. & Exper. Therap.* 143:230, 1964. 10. Earley, L. E., and Orloff, J.: *Ann. Rev. Med.* 15:149, 1964. 11. Fuchs, M., and Mallin, S. R., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 276. 12. Ford, R. V., in Moyer, J. H., and Fuchs, M.: *op. cit.*, p. 290. 13. cited in Fuchs, M., and Mallin, S. R. (ref. 11): *op. cit.*, p. 283.



## Naturetin®

SQUIBB BENDROFLUMETHIAZIDE  
to reduce excess fluid  
or high blood pressure

SQUIBB



"The Priceless Ingredient" of every product is the honor and integrity of its maker.



## ORGANIZATION / Continued

ences, closed-circuit television and medical motion picture programs, and a variety of scientific exhibits.

Of special interest are the postgraduate courses, which have been expanded to three topics: obstetrics and gynecology, fluid and electrolyte balance, and cardiovascular disease. Each course will consist of three half-day sessions, each of which will feature several outstanding teachers. There will be a \$10 registration fee for each course.

Lively discussion should be a feature of four Breakfast Roundtable Conferences. The topics: "An Agonizing Reappraisal of Cancer Chemotherapy," "The Problem and Potential of LSD," "The Management of Metabolic Bone Disease," and "Indication for Cardioversion."

An outstanding program of close-circuit color television and more than 25 medical motion pictures will be presented.

Topics at the scientific sessions include: scintillation scanning, radiation and cancer, clinical pulmonary physiology, gastroenterology, futuristic diagnostic and therapeutic tools, neck pain, antibiotics, urology, aerospace medicine, unconsciousness, dermatology, juvenile diabetes, endocrine and metabolic diseases, pediatrics, surgery, hematology, psychiatry, and otolaryngology.

Scientific and industrial exhibits and all scientific meetings will be in the newly expanded Las Vegas Convention Center. The AMA House of Delegates will meet Nov. 28-30.

## SKF Steps Up Grant Program

The Smith Kline & French Foundation has increased its support of clinical pharmacology programs by authorizing grants totaling \$436,000 for this purpose. During 1965 the Foundation's clinical pharmacology grants totaled \$255,000.

The Foundation awarded a three-year grant of \$150,000 to Harvard University Medical School; \$150,000 to the University of Pennsylvania (also for a three-year program); \$45,000 to the University of Pennsylvania School of Medicine for a three-year training program; \$74,000 to Temple University School of Medicine to supplement \$84,000 granted during 1964 and 1965, and \$17,000 to the Pharmaceutical Manufacturers Association Foundation to support fundamental investigations in toxicology, research in clinical

pharmacology and training of clinical pharmacologists.

Smith Kline & French Foundation is the educational and scientific trust of Smith Kline & French Laboratories, the Philadelphia-based prescription drug company. During the first half of 1966 its total grants authorized were \$838,137.

## Pickets March at AMA Quackery Congress

Top officials of American medicine, government, and national organizations scored quackery and cultism at AMA's Third National Congress on Medical Quackery at Chicago. Proponents of Krebiozen, the much-discredited and controversial drug supposedly for use against cancer, picketed the conference.



*Surrounded by pickets who are convinced that Krebiozen not only cures cancer but also that the "medical monopoly" has bottled it up, Assistant Executive Secretary Charles L. Mathews hears their story. Scene was on Michigan Ave. between Pick-Congress Hotel and historic Grant Park.*

Speakers included Dr. Charles L. Hudson of Cleveland, AMA president, Dr. James L. Goddard of Washington, FDA commissioner, Arthur Flemming of the University of Oregon, former HEW secretary, and a galaxy of noted authorities.

Marking an historic first, an entire day of the meet was devoted to the cult of chiropractic. The state association was represented by its executives, Rowland B. Kennedy and Charles L. Mathews of Jackson. Both participated in a pre-Congress invitational meeting of state association representatives on chiropractic legislation.

Wide coverage of the Congress by the press and television underscored its effectiveness in the continuing fight against quackery.





## MEETINGS

### NATIONAL AND REGIONAL

American Medical Association, Clinical Convention, Nov. 28-Dec. 1, 1966, Las Vegas. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago, Ill. 60610.

Southern Medical Association, Nov. 14-17, 1966, Washington. Mr. Robert F. Butts, Executive Director, 2601 Highland Ave., Birmingham, Ala. 35205.

### STATE AND LOCAL

Mississippi State Medical Association, May 15-18, 1967, Biloxi. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson.

Amite-Wilkinson Counties Medical Society, Third Monday March, June, September, December. S. E. Field, Jr., Centreville, Secretary.

Central Medical Society, First Tuesday, January, March, May, September, November, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. James R. Cavett, Jr., Suite B-6, Medical Arts Building, Jackson, Secretary.

Claiborne County Medical Society, First Monday January and July, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Port Gibson, Secretary.

Clarksdale and Six Counties Medical Society, Third Wednesday March and First Wednesday November, 2:00 p.m., Clarksdale. Robert L. Forman, Coahoma County Hospital, Clarksdale, Secretary.

Coast Counties Medical Society, First or Second Wednesday, January, March, May, September, and November. C. D. Taylor, Jr., 113 Davis Ave., Pass Christian, Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Secretary.

DeSoto County Medical Society, Second Thursday, January, April, July, and October, 1:00 p.m., Mary's Restaurant, Hernando. Malcolm D. Baxter, Jr., McIntosh-Baxter Clinic, Hernando, Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Secretary.

Homochitto Valley Medical Society, First Tuesday Quarterly, Jefferson Davis Memorial Hospital, Natchez. Walter T. Colbert, Jefferson Davis Memorial Hospital, Natchez, Secretary.

North Central District Medical Society, Third Wednesday March, June, September, and December. William E. Riecken, Jr., P. O. Box 831, Kosciusko, Secretary.

Northeast Mississippi Medical Society, Second Tuesday, March, June, September, and December, Corinth. S. Jay McDuffie, Nettleton, Secretary.

North Mississippi Medical Society, First Thursday, April and October, Oxford. M. Beckett Howorth, Jr., 2200 S. Lamar Blvd., Oxford, Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. Joseph C. Griffing, Lucius Olen Crosby Memorial Hospital, Picayune, Secretary.

Prairie Medical Society, Second Tuesday, March, June, September, December. J. M. Griffith, 824 Second Ave. North, Columbus, Secretary.

South Central Mississippi Medical Society, Second Tuesday March, June, September, and December. Julian T. Janes, Jr., 304 Clark, McComb, Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. John E. Green, Green Clinic, Hattiesburg, Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg. Patrick G. McLain, 1301 Washington St., Vicksburg, Secretary.

against the usual gram-negative urinary pathogens

# Why use five...where one will do?



**In a recent 217-patient hospital study,<sup>1</sup>** urinary tract infections were treated with a variety of widely prescribed antimicrobial agents including: a sulfonamide (40 patients), chloramphenicol (20 patients), nitrofurantoin (33 patients), nalidixic acid (30 patients), tetracycline (27 patients), colistimethate sodium (22 patients) ... and 2 combinations of 5 agents each (45 patients). The 2 combinations were selected to afford maximal theoretical antibacterial coverage against the usual urinary pathogens. They were (1) tetracycline, chloramphenicol, nitrofurantoin, ristocetin and polymyxin B; and (2) tetracycline, chloramphenicol, erythromycin, nitrofurantoin and colistimethate sodium.

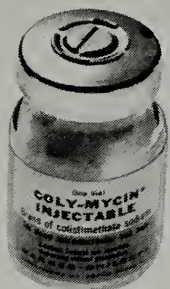
**This clinical study shows** that the two combinations of antibiotics were not superior to some of their single components. The authors point out that antibiotic antagonism often negates theoretical advantages of multiple therapy. Coly-Mycin Injectable (colistimethate sodium) was one of the single components that was shown to be equal to the combinations and eradicated bacteriuria in two-thirds of the patients.

Theoretical choice of multiple antibacterial therapy has been shown to be no more effective than one well-chosen agent which also offers least patient exposure to possible side reactions, toxicities, allergic manifestations and higher drug costs.

1. McCabe, W. R., and Jackson, G. G.: New England J. Med. 272:1037, 1965.



in gram-negative urinary tract infections often the single well-chosen agent



## Coly-Mycin<sup>®</sup> Injectable (colistimethate sodium)

**Indications:** Especially indicated for the treatment of severe acute and resistant chronic urinary tract infections due to sensitive strains of gram-negative organisms. Also indicated in respiratory tract, surgical, wound and burn infections and in septicemia due to sensitive organisms. Particularly indicated when any of these infections are caused by sensitive strains of *Pseudomonas aeruginosa*.

**Adverse Reactions:** Occasional reactions such as circumoral paresthesias, tingling of the extremities, pruritus, vertigo or dizziness may occur. Reduction of dosage may alleviate symptoms. Therapy need not be discontinued, but such patients should be observed with extra care.

**Warning:** Patients should be cautioned not to drive vehicles or use hazardous machinery while on therapy.

**Precautions:** In cases of impaired or suspected renal impairment, use with greater caution and reduce dosage in proportion to extent of impairment. Transient elevations of BUN have been reported. As a routine precaution, appropriate blood studies should, therefore, be made during prolonged therapy.

As with all polypeptides, the possibility of muscular weakness, including apnea, due to inadvertent overdosage or normal dosage in the presence of impaired renal function, should not be overlooked. In cases of apnea, medication should be promptly discontinued and assisted respiration given until serum levels fall and normal breathing is restored.

Other antibiotics, such as kanamycin, streptomycin, dihydrostreptomycin, polymyxin, and neomycin, may also have varying neurotoxic or nephrotoxic potential. They should be used with great caution concomitantly with Coly-Mycin Injectable (colistimethate sodium).

**For deep intramuscular injection only.**

**Dosage:** By the I.M. route only, in 2 to 4 divided doses ranging from 1.5 to 5 mg./Kg./day (0.7 mg. to 2.3 mg./lb./day). Average adult dose is 2.5 mg./Kg./day (1.1 mg./lb./day). In the presence of bacteremia, septicemia, or other serious infection, greater than average doses may be required; however, maximum daily doses should not exceed 5 mg./Kg. (2.3 mg./lb.) where renal function is normal.

**Not recommended against *Proteus*.**

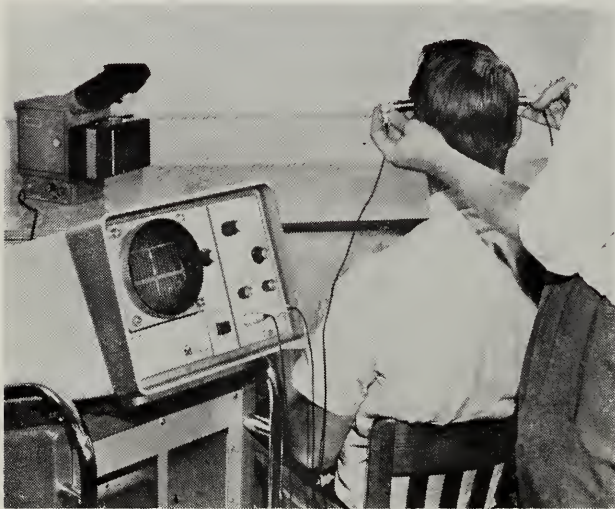
Colistin is also available (as colistin sulfate) in: Coly-Mycin<sup>®</sup> Pediatric for Oral Suspension (not for systemic use), and Coly-Mycin<sup>®</sup> Otic with Neomycin and Hydrocortisone.

Full information is available on request.

## New Echoencephalograph Speeds Diagnosis

A diagnostic instrument that simultaneously displays all information needed to determine midline shift in the brain has been developed by Magnaflux Corporation of Chicago.

Designated the ML-100 Echoencephalograph, the new pulse ultrasonic instrument reduces the chance of errors in diagnosis and decreases the time required for examination of the patient. The unit requires only four simple procedures to complete the test, compared to 13 steps required by some other instrumentation currently available.



*ML-100 Echoencephalograph simultaneously displays all information needed to determine midline shift. Here, the examiner applies transducers over squamous temporal bone where ultrasonic wave enters the head and passes through to the midline.*

The examiner places a transmitting transducer to the right side of the head over the squamous temporal bone. The ultrasonic wave enters the head at this point and travels through to the left side of the head where the examiner has applied a receiving transducer over the left squamous temporal bone. The three traces—left, right, and through-transmission are displayed simultaneously on the cathode ray tube, permitting identification of the midline echo by comparing the three coincident signals. Normal midline echos should line up in the same position as the through-transmission signal, with displacement indicating a shift.

After applying the transducers and identifying the midline echo, the examiner can obtain a

permanent record of the echo by exposing the film in a swingaway Polaroid camera and removing the developed film in 10 seconds. An electronic switching circuit in the ML-100 does the switching for the examiner and enables him to concentrate on obtaining the proper echo display for correct diagnosis. When he is ready to photograph the display, he merely pushes a foot switch once to trip the camera shutter.

In addition to clinical application, the instrument is useful in general practice in determining whether the patient will require further more costly and painful examination, according to the developers.

## Dr. Banahan Outlines Disability Exam Methods

Practicing physicians who see patients with severe disabilities where benefit eligibility under Social Security may exist are urged to refer such patients to the local Social Security office. This was the statement of Dr. B. F. Banahan, Jr., of Jackson, chief medical consultant of the Disability Determination Unit of the Vocational Rehabilitation Division.

Dr. Banahan said that "such referrals reflect a sense of responsibility to the patient on the part of his physician." He cautioned, however, against assuring the disabled patient that he will be entitled to benefits because of various requirements of Social Security law.

Where patients are unable to visit a local Social Security office, Dr. Banahan said, arrangements can be made for a representative of the office to call on the patient.

Dr. Banahan emphasized that medical reports which are essential to disability determination are "not requests for the doctor's opinion as to disability in his patient but rather a request for objective findings and clear descriptions of symptomatology."

"The doctor best serves his patient," Dr. Banahan said, "not by declaring that he is 'totally and permanently disabled' but rather by supplying a history and description of the impairment that are adequate for a reviewing physician to determine the condition of the patient and the degree of impairment."

The applicant's claim for disability benefits and the medical report are evaluated by a team of a licensed physician and an examiner trained in vocational evaluation, Dr. Banahan said. Physicians preparing medical reports may include cop-



ies of permanent portions of charts and other medical records.

The statement also underscored the fact that the patient and not the government is responsible for providing the initial medical evidence in support of the claim.

Dr. Banahan said that the Disability Determination Unit at Jackson is located at 515 E. Amite St. and that physicians' request for information will be promptly supplied.

## ACR Lashes Plan for Radiation Records

A proposed federal-state program to create an elaborate radiation exposure record keeping system to aid in handling workmen's compensation claims for ionizing radiation workers is both unneeded and unworkable, a spokesman for the American College of Radiology declared Wednesday afternoon.

In testimony prepared for presentation to a hearing of the Joint Committee on Atomic Energy, Dr. Antolin Raventos, professor of radiology at the University of Pennsylvania and chairman of

the College's Commission on Radiologic Units, Standards and Protection, stated the ACR's opposition to the enactment of bills H.R. 16920 and S. 3722.

The bills would authorize the Atomic Energy Commission to work with the states to establish a permanent repository for the exposure records of all radiation workers. An employer would be responsible for keeping such records and forwarding them to state agencies. The states would pass the data along to federal record centers where it would be available if a worker later had cause to suspect that an injury or illness was caused by exposure to ionizing radiation during his employment.

"We are objecting to the creation of an elaborate system for which there is no demonstrated need," said Dr. Raventos. "We also object to the detailed effort involved in keeping records of unreliable exposure data, such as is obtained from film badge systems."

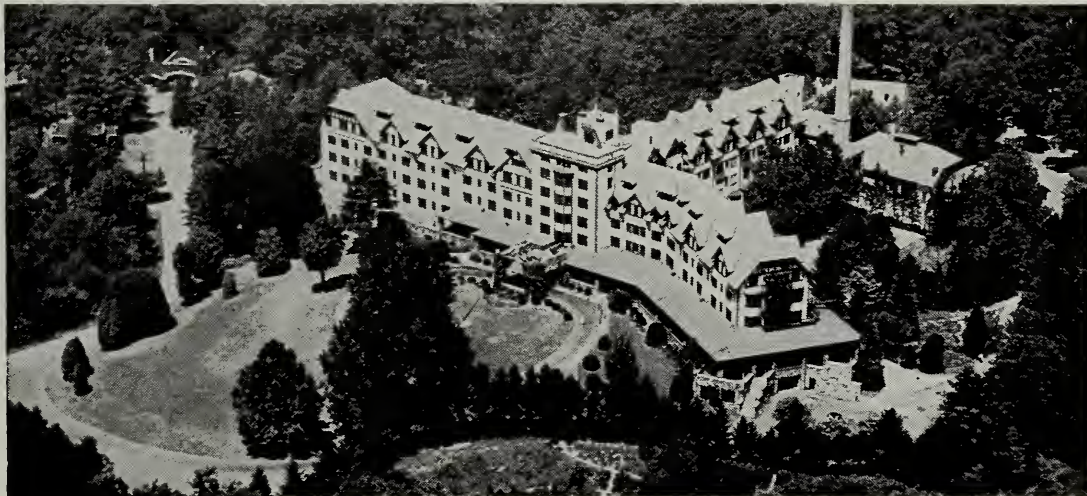
Dr. Raventos was one of several experts testifying against the bill on behalf of scientific groups in hearings scheduled September 20 and 21. In an earlier round of testimony August 30, Atomic Energy Staff members had detailed their proposed program, saying that it would require records comparable to those required of AEC contractors.

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## Dr. Nelson Is New MPAC Chairman

Dr. Howard A. Nelson of Greenwood was elected state chairman of the Mississippi Medical Political Action Committee for 1966-67. The committee is a state-wide, voluntary organization dedicated to the promotion of good government.

Dr. E. Leonard Posey of Jackson was named secretary-treasurer. Both he and Dr. Nelson are on the 10 member board of directors of the group. Membership is open to physicians, members of the medical auxiliary, and to others in the health service field.

The committee encourages physicians to understand the nature and actions of their government and provides a means for their organizing themselves to carry out their civic responsibilities in this respect.

In addition to Drs. Nelson and Posey, the directors include Drs. Robert L. Holley of Oxford, Frank M. Davis of Corinth, Paul B. Brumby of Lexington, E. E. Robinson of Meridian, James C. Bass, Jr., of Laurel, G. Swink Hicks of Natchez, Kendall D. Gregory of Gulfport, and Mrs. R. Mayo Flynt of Meridian who represents the medical auxiliary.

The new chairman, Dr. Nelson, is a past president of the Mississippi State Medical Association who continues to serve in posts of leadership in the profession.

## Hill-Burton Funds OK'd for Mental Care Units

New regulations permitting the use of Hill-Burton funds for constructing, expanding, or modernizing psychiatric units in general hospitals and certain other mental hospital facilities were announced by Secretary of Health, Education, and Welfare John W. Gardner.

The new regulations, which appeared in the September 16 issue of the *Federal Register*, stipulate that Hill-Burton funds may be used for psychiatric beds or units in general hospitals only if the State's allotment under the Community Mental Health Centers Construction Act (Public Law 88-164) has been exhausted. This restriction stems from the "nonduplication provision" included in

Public Law 88-164. In addition, any psychiatric units of general hospitals approved for Hill-Burton funds must conform to the State plan approved under the Community Mental Health Centers Program.

## AMA Field Rep Visits Local Societies

Visiting Mississippi as a guest of Dr. James T. Thompson, state association president, Whalen M. Strobhar of Chicago, AMA field representative, conferred with officials at the Jackson headquarters building and visited meetings of two component medical societies.

The Florida native, assigned to Alabama, Florida, Mississippi, and Tennessee, was in the state



*Taking time out during travel to Greenville from Vicksburg, Dr. James T. Thompson, state association president, shows AMA Field Representative Whalen M. Strobhar the Mississippi monument in the historic Vicksburg National Military Park.*

during mid-October. He accompanied Dr. Thompson to meetings of the West Mississippi Medical Society at Vicksburg and the Delta Medical Society at Greenville.

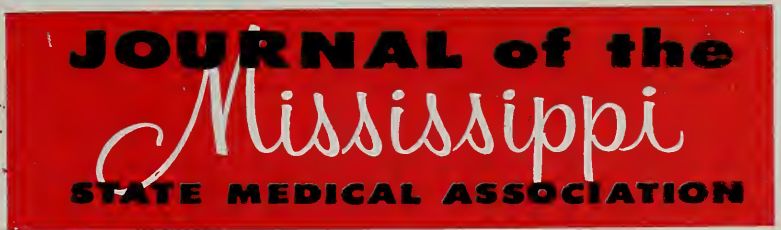
Duties of AMA field representatives include liaison with officers, local societies, and official bodies of state medical associations.



Volume VII

Number 12

December 1966



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# NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

December 1966

Dear Doctor:

Mississippi's registered professional nurses have served notice that they will not work for less than \$500 per month beginning in 1967. Action came at recent Mississippi Nurses Association convention when delegates said that \$6,000 annually will be the minimum beginning salary for RN's.

The resolution also set a higher salary goal of \$6,500 for nurses by the end of 1968. The new minimum represents as much as \$235 per month increase over present beginning salaries now paid by state hospitals. Nurses' edict compounds hospital cost dilemma already posed by minimum wage law on unskilled workers.

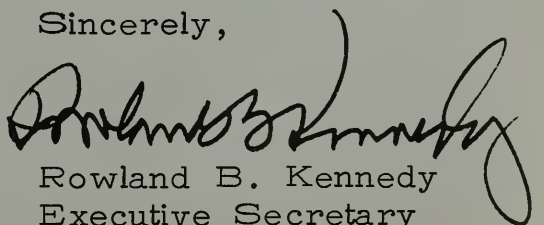
Alabama is caught up in another chiropractic crisis with the cultists fighting each other as well as physicians. New rump association of chiropractors blasts physicians and drugs, while chiropractic "regulars" have started to crusade for hospital privileges and use of state-supported laboratory facilities.

The American College of Radiology says that the costs of x-ray services to Americans have risen only about 1 per cent per year. ACR said that modest cost increases are at much lower rate than mounting prices of supplies, x-ray equipment, and technicians pay. Estimates are that overall price rise in radiology services is about one-fifth that for all medical care since 1946.

One out of every six physicians licensed for the first time last year was a foreign medical graduate. The Association of American Medical Colleges reported almost 1,500 foreign-trained M.D. licentiates in 1965 against about 7,500 U.S. and Canadian graduates. Licenses were granted in only 40 states, the remaining jurisdictions either severely limiting or forbidding licensure of foreign trainees.

Tax savings under the new Keogh amendments will almost double those of old program for most self-employed professionals. Plan participants will be able to deduct \$2,500 or 10 per cent of earned income, whichever is less, starting with tax years after 1967. Trust experts are urging all to re-evaluate benefits potential. MSMA program has shown good performance.

Sincerely,



Rowland B. Kennedy  
Executive Secretary



## DATELINE - MEDICAL AMERICA

### SBH Tools Up For Medicare's Phase II

Jackson - The State Board of Health's Medicare Unit, the certifying and counseling agency for institutional services, is working to assist implementation of posthospital extended care services on January 1. The second and final phase of the program includes home health and nursing home services. Except for home health visits under Part 1-B, neither service is authorized unless the patient has been previously hospitalized. Program provides, under Part 1-A, for 100 home health visits annually and nursing home care for 100 days per spell of illness.

### MEDLARS Will Be Expanded By NLM

Bethesda, Md. - The National Library of Medicine's MEDLARS (Medical Literature Analysis and Retrieval System) which makes use of computers will be expanded to include automation of the card catalogue and serial records in addition to development of a new drug information module. Journal MSMA is catalogued and indexed at the national library on MEDLARS.

### CMERF Will Study Continuing Education For Physicians

San Francisco - The California Medical Education and Research Foundation, an arm of the giant state medical association, will receive a \$52,000 grant under the Heart Disease, Cancer, and Stroke regional medical program to study physician participation in postgraduate education. The effort supports implementation of the regional medical program in California, the state association reported. California has already received a planning grant of \$223,000 and has an application pending for another \$2.5 million.

### Accidental Gunshot Death Rate Mounts

New York - Firearms accidents in 1966 will claim about 2,200 lives, according to studies by Metropolitan Life Insurance Co. actuaries. Highest rates are in Rocky Mountain states and in South Central area where there is easy access to outdoor life and hunting. Forty per cent of the deaths will occur during the hunting season, and nine out of 10 victims will be males. Death rate is slightly higher for whites than nonwhites.

### Illinois Ob-Gyn Experiment Ups Hospital Utilization

Chicago - Intermixture of 26,000 obstetrical patients with over 5,000 gynecological patients on maternity floors of 12 Chicago hospitals resulted in more efficient use of hospital beds and less delay in hospitalizing gyn cases. Study was initiated by Illinois Department of Public Health and Chicago health authorities when a progressive increase in empty obstetrical beds was observed while the demand for general acute beds grew.



## ERYTHROCIN®-SULFAS

### Brief Summary

**Indications:** Use Erythrocin-Sulfas in infections more susceptible to the combination than to either agent alone. These are usually found in urinary, lower respiratory tract, and chronic ear infections.

**Contraindications:** Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or new born infants.

**Warnings:** As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

**Precautions:** Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated.

**Adverse Reactions:** Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

If a reaction or overgrowth of nonsusceptible organisms occurs, withdraw the drug.

**Supplied:** The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. each of sulfadiazine, sulfamerazine and sulfamethazine. 603303



## WHO Gets U.S. Funds for Mental Research

A \$125,000 grant to the World Health Organization to help finance an international pilot study of schizophrenia has been announced by Dr. Stanley F. Yolles, Director, National Institute of Mental Health, U. S. Public Health Service. An additional \$250,000 in support by NIMH is planned over a three-year period. Other participating countries will support the project in varying amounts and the WHO will supply \$145,000 each year.

The study is part of a research program in mental health recommended by the International Scientific Group on Mental Health Research. The program was endorsed by the WHO Advisory Committee on Medical Research.

Scientists participating in the study will try to devise and to apply standard methods of identifying schizophrenics. They will attempt to agree on standard ways to describe the psychological and behavioral characteristics of schizophrenic patients, and for determining the effect that cultural and social differences have on the course of the disease.

The study will be conducted in eight countries. They are the United States, Russia, Denmark, Great Britain, Columbia, Nigeria, Nationalist China and India.

Confusion and disagreement that still exist over diagnosis, natural history of the illness, and response to the various treatments for schizophrenia make an international study desirable, NIMH spokesmen say.

Another reason for choosing schizophrenia for the first international study of this sort is the frequency and severity of the illness all over the world.

Investigators who proposed the research said this type of study should precede any future large-scale international epidemiological survey of mental disorders.

A group of scientists including clinicians, epidemiologists, social scientists and statisticians began developing plans for the investigations in a meeting at Geneva last September.

Design of the study calls for collaboration by a field center in each of the participating nations. Overall supervision will be supplied from the WHO headquarters.

Uniform methods will be used at each of the field stations to screen persons admitted to psychiatric facilities to obtain the desired number and types of psychiatric patients for the study. Each subject will be 15 years or older and will be free of organic or physical diseases.







## ORIGINAL PAPERS

## Duodenal Obstruction in the Newborn

BENTON M. HILBUN, M.D., and JAMES D. HARDY, M.D.  
Jackson, Mississippi

CONGENITAL ANOMALIES of the duodenum resulting in obstruction have been recognized since the early 1800's. The most commonly observed anomalies are incomplete rotation, stenosis or atresia, and annular pancreas. We have reviewed the cases seen at the University Hospital from July 1955 through December 1965 and would like to present these with respect to the diagnosis and management of the lesion.

It has been observed that in the five-week embryo the primitive gut is closed by a proliferation of epithelial cells; shortly these begin to recede by a process of vacuolization until the bowel assumes its final histological structure. It is believed that failure or faulty recession of the cells may lead to malformation. There has also been experimental evidence indicating that abnormal development of the blood supply to an area of gut may lead to faulty vacuolization and result in atresia of the segment.

## CLASSIFICATION OF CASES

Intrinsic malformations of the intestinal tract, excluding anal atresias, are very uncommon. In a 10 year survey at the University Hospital we have

From the Department of Surgery, University of Mississippi School of Medicine.

encountered only 11 cases of duodenal obstruction, two of these resulting from annular pancreatic tissue.

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*Incomplete rotation, stenosis or atresia and annular pancreas are the most commonly observed congenital anomalies of the duodenum resulting in obstruction. The cases seen at the University Hospital from July 1955 through December 1965 are reviewed. Diagnosis and management of the lesions are discussed.*

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The classification of these cases, according to Forssner,<sup>1</sup> was as follows:

duodenal diaphragm complete .....	2
duodenal diaphragm incomplete .....	2
duodenal stenosis complete .....	2
duodenal stenosis incomplete .....	1
duodenal atresia—connected by a band .....	2
duodenal atresia—unconnected .....	0
annular pancreas complete .....	2
annular pancreas incomplete .....	0
Total .....	11

Figures 1 and 2 illustrate the various classes of anomalous duodenal obstruction.

## OBSTRUCTION / Hilbun and Hardy

The clinical symptoms are those of pyloric obstruction. The onset of symptoms usually occurs at an early age; it ranged from several hours to several weeks of age in this series. Vomiting usually follows feeding and may or may not be bile stained depending upon the site and the extent of obstruction. In the majority of these cases the site of obstruction was distal to the ampulla and was therefore productive of bile stained vomitus.

The diagnosis is usually apparent from the history. Physical examination may reveal abdominal distention and visible peristaltic waves. Dehydration may be present. Plain x-rays of the abdomen will reveal gastric dilatation and a paucity of air in the intestinal tract. The so-called double bubble sign of duodenal obstruction may be seen in the air filled stomach and first portion of the duodenum. A contrast medium, gastrografin, barium, or Lipiodol, was used in seven of these eleven cases to confirm the diagnosis.

### DIAPHRAGMATIC OBSTRUCTION

Case 1. F. P.—This one week old colored female was admitted with a history of vomiting since the first day of life. There was marked dehydration and metabolic alkalosis. The laboratory findings were:  $\text{CO}_2$  combining power 35 mEq/L, Na 105 mEq/L, Cl 60 mEq/L, K 5.5 mEq/L, Hgb 14.3 gm. per cent, and BUN 102 mg. per cent. X-rays revealed a double bubble sign and the gastrointestinal series confirmed complete obstruction of the duodenum. After 72 hours of fluid and electrolyte corrective therapy the infant was explored and found to have a complete diaphragm in the second portion of the duodenum just distal to the ampulla. The diaphragm was excised and the duodenum closed in a transverse manner. A nasogastric tube was left in place for three days and the infant was fed on the fourth day. There were no postoperative complications.

Case 2. R. W.—This five-day-old infant was admitted with a history of vomiting green material since birth. There was evidence of marked dehydration. The BUN was 150 mg. per cent, Cl 98 mEq/L,  $\text{CO}_2$  combining power 29 mEq/L, K 5.3 mEq/L, Na 138 mEq/L, and hemoglobin 19.6 gm. per cent. A gastrointestinal series revealed complete obstruction of the duodenum. Laparotomy disclosed a complete diaphragm just below the ampulla. A duodeno-duodenostomy bypass procedure was done. A nasogastric tube was used for three days and the infant fed on the

fourth postoperative day. There were no immediate complications; however, at age four months the child required a laparotomy and lysis of adhesions for small bowel obstruction.

Case 3. D. W.—This three-week-old female was admitted with a history of vomiting green material since two weeks of age. The laboratory reported Cl 100 mEq/L,  $\text{CO}_2$  combining power 17 mEq/L, Na 141 mEq/L, K 7.7 mEq/L, BUN 23 mg. per cent and Hgb 16.1 gm. per cent. X-rays revealed moderate gastric dilatation. Upon laparotomy a duodenal diaphragm with a small 0.5 mm. perforation in the center was found below the ampulla. A duodeno-duodenostomy and a gastrostomy were performed, and a small tube was passed into the jejunum for feeding purposes. There were no postoperative complications.

Case 4. R. B.—This 10-day-old male was admitted with a history of vomiting green material since birth. The x-rays revealed a double bubble. Laboratory findings were K 3.0 mEq/L, Cl 60 mEq/L, Ca 4.2 mEq/L, Na 145 mEq/L,  $\text{CO}_2$  combining power 40 mEq/L, Hgb 7.8 gm. per cent. This infant expired during correction of the electrolytes, and the autopsy revealed a duodenal diaphragm in the second portion with incomplete obstruction.

### OBSTRUCTION DUE TO ATRESIA

Case 5. W. D.—This two-day-old male infant was admitted because of vomiting since birth. There were associated jaundice and cyanosis. Laboratory results revealed a hemoglobin of 20 gm. per cent, Cl 87 mEq/L, K 5.5 mEq/L, and Na 136 mEq/L. A gastrointestinal series revealed complete obstruction of the duodenum. At laparotomy complete atresia of duodenum was found and a duodeno-jejunostomy was performed. On the sixth postoperative day the patient developed pulmonary edema and expired. A duodenal fistula had also been present.



Figure 1. Diagrammatic representation of neonatal duodenal obstruction. The shaded area represents the site of anomalies.



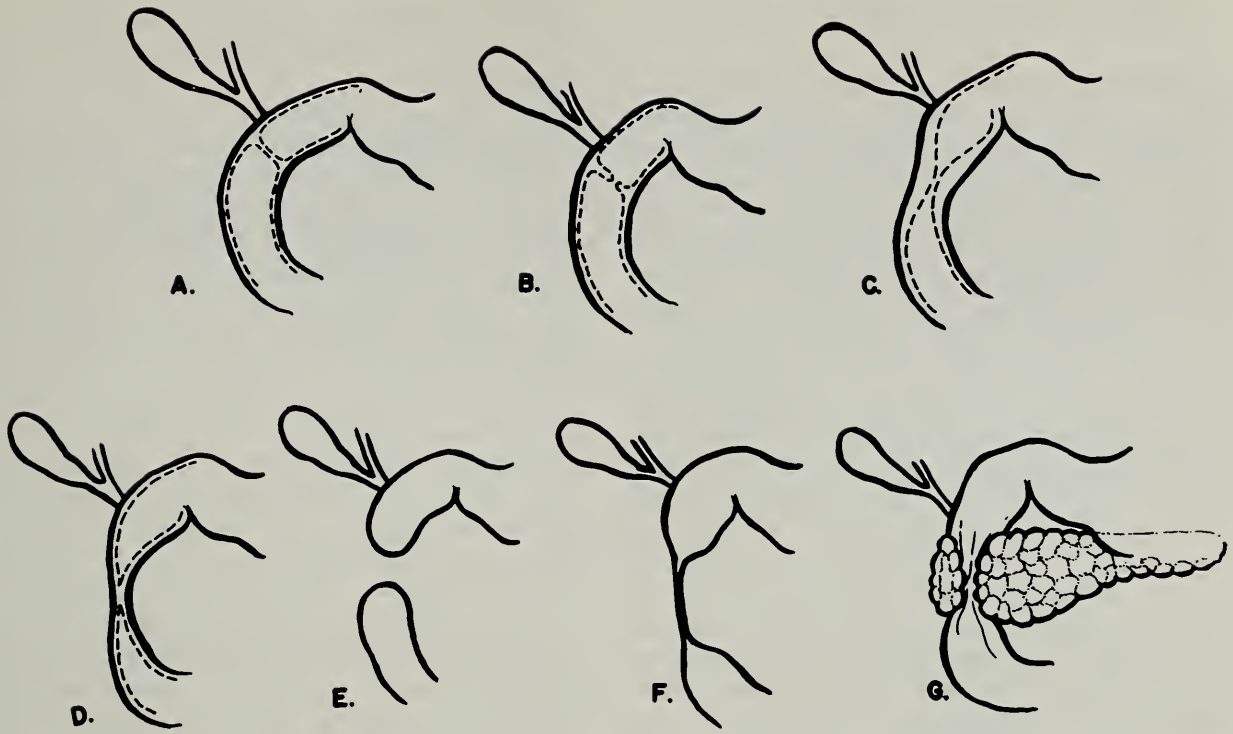


Figure 2. Diagrammatic representation of various types of neonatal duodenal obstruction: (A) complete diaphragm, (B) incomplete diaphragm, (C) incom-

plete stenosis, (D) complete stenosis, (E) complete atresia, (F) incomplete atresia, and (G) annular pancreas.

Case 6. G. H.—This three-day-old female was admitted with a history of vomiting since birth. X-rays revealed a dilated stomach and no air in the small bowel or colon. Laparotomy disclosed complete atresia of the duodenum and a duodeno-duodenostomy was performed. The infant expired on the third postoperative day. The cause was believed to be aspiration but postmortem examination was refused.

#### OBSTRUCTION DUE TO STENOSIS

Case 7. V. N.—This four-day-old female mongoloid was admitted with a history of vomiting since the age of two days. A gastrointestinal series revealed complete obstruction of the duodenum. A laparotomy was performed and complete duodenal stenosis below the ampulla was found. A duodeno-jejunostomy was done. The infant died in pulmonary edema on the first postoperative day. It was believed that excessive intravenous fluid therapy contributed to the outcome.

Case 8. L. S.—This seven-day-old male was admitted because of vomiting since birth. Laboratory findings were hemoglobin 19.6 gm. per cent,  $\text{CO}_2$  combining power 31 mEq/L, Cl 95 mEq/L, Na 140 mEq/L, BUN 77 mg. per cent, and K 5.0 mEq/L. The gastrointestinal series showed obstruction and laparotomy revealed incomplete stenosis which was corrected by a pyloroplasty.

There was one additional case of duodenal obstruction due to stenosis, but it was complicated by multiple gastrointestinal anomalies including imperforate anus and esophageal obstruction with tracheo-esophageal fistula and was not considered in this analysis.

#### OBSTRUCTION BY ANNULAR PANCREAS

Case 9. R. L.—This one-day-old mongoloid male had a history of vomiting since birth. X-rays revealed the double bubble sign and the gastrointestinal contrast studies confirmed complete obstruction of the duodenum. Laparotomy revealed an annular pancreas. A duodeno-jejunostomy was performed with no postoperative complications.

#### DISCUSSION

Duodenal malformation with resulting obstruction usually presents early in life with vomiting as the primary symptom. There is often an associated abnormality. In our series mongolism was present in two cases and tracheo-esophageal fistula and imperforate anus were present in a third case. Jackson<sup>2</sup> reported that 70 per cent of patients with annular pancreas have associated anomalies, the more common being mongolism, congenital heart defects, tracheo-esophageal fistula and malrotations of the gut.

## OBSTRUCTION / Hilbun and Hardy

Metabolic alkalosis secondary to chloride loss from vomiting was a frequent finding, and it is necessary to correct this imbalance prior to surgery. The fluid-electrolyte balance is precarious in the newborn and must be handled in a precise manner. Knowledge of the exact weight of the patient and of serum electrolyte levels is essential. The total body water deficit can be estimated from the clinical evaluation of the degree of dehydration. Mild dehydration requires fluids amounting to 3-4 per cent of body weight, moderate dehydration 5-8 per cent of the weight and severe dehydration 8-12 per cent of the weight. This fluid represents only the initial replacement; the continuing daily loss must also be taken into account. Salt replacement therapy is calculated from the serum chloride concentration and the extracellular fluid volume (25 per cent of the body weight in kilograms). After a satisfactory urinary output of sodium and chloride is obtained, potassium should be administered (approximately 3-5 mEq. per kilogram of body weight each 24 hours).

In seven of these eleven cases a contrast medium was used to substantiate the diagnosis. The level of duodenal obstruction was below the ampulla in nine cases and just at the level of the ampulla in the tenth. The surgical procedures used to correct the obstructions included entero-enterostomy, pyloroplasty and excision of the diaphragm when present. The consensus is that entero-enterostomy is usually the most successful procedure.

The mortality rate after surgical repair of neonatal duodenal obstruction varied from 25 per cent to 45 per cent in recent reports. The variation is usually related to the extent of associated anomalies. Singleton and Fish<sup>3</sup> reviewed cases of duodenal obstruction in the newborn at the Galveston Medical Branch Hospital and reported six deaths in seventeen cases (35 per cent). The majority of these deaths occurred in patients with associated anomalies. Of a total of eleven cases of duodenal obstruction reported here, three had associated anomalies—two mongolism and one tracheo-esophageal fistula and imperforate anus. One of these three survived. One patient died during the presurgical period of electrolyte correction and another had multiple gastrointestinal anomalies and was excluded. Of the nine patients who came to surgery for correction of duodenal obstruction, three expired during the

postoperative period, two from pulmonary edema. The third probably died of aspiration, but autopsy was refused.

We believe the procedure of choice in cases of duodenal obstruction to be entero-enterostomy, preferably duodeno-duodenostomy. Excision of the diaphragm may injure the ampulla or cause a functional obstruction to develop later due to abnormal neurogenic function in the atretic segment. A gastro-jejunostomy should not be performed unless absolutely necessary because of the possible formation of marginal ulcers in later years.

In order to minimize the problem of fluid and electrolyte management, it is important to resume feedings in these infants as soon as possible. Most of these cases required nasogastric suction and intravenous fluids for two or three days after surgery as well as several days of intravenous fluid therapy pre-operatively.

Gastrostomy using a double lumen tube with one limb placed in the jejunum via the bypass for feeding and with the other remaining in the stomach for decompression might reduce these problems. Feedings could then be started as early as 12-24 hours postoperatively and the gastric aspirate could be reinstalled into the feeding limb of the gastrostomy tube. We have devised such a tube and plan to use it in selected cases. We feel that this technique would diminish both fluid and respiratory complications in gastrointestinal surgery in the newborn.

## SUMMARY AND CONCLUSIONS

1. Ten cases of neonatal duodenal obstruction are reported. Nine of these were operated upon with three deaths.
2. The importance of fluid and electrolyte therapy is emphasized. While dehydration must be corrected, serious overhydration must be carefully avoided.
3. Operative maneuvers found useful have been considered. ★★★

2500 N. State St. (39216)

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# Intrachordal Injection of Plastic Substances for Correction of Chronic Vocal Disability

GODFREY E. ARNOLD, M.D.  
Jackson, Mississippi

INJECTION OF FOREIGN SUBSTANCES into the vocal cords for the correction of chronic vocal disability has a long history. In 1911 Bruenings<sup>1</sup> had the ingenious idea of injecting paraffin of waxy consistency into a paralyzed vocal cord in order to bring it to the midline and to correct its atrophic bowing. He invented a special metal pressure syringe for this purpose which is still known under his name. In subsequent papers Bruenings reported on the lasting good results of his procedure. His experience was collaborated by numerous other authors.<sup>2</sup> I myself used the paraffin injection method during World War II when nothing else was available for the rehabilitation of patients who had become aphonic from unilateral laryngeal paralysis.

In times of war, the cause of laryngeal paralysis is usually a bullet injury of head or neck. Otherwise thyroidectomy is the most frequent single cause of laryngeal paralysis. Other causes include chest surgery, radical neck surgery, hypertrophic cardiac disease, aortic aneurysm, lesions of the upper lung portions, viral infections, or progressive neurologic lesions. About one third of the cases seen in clinical practice remain unclarified despite thorough examination and are then called idiopathic. This latter group is most likely due to viral infection by a neurotropic agent, such as seen in mild cases of poliomyelitis.

Around the turn of the century, paraffin was widely used in plastic surgery to correct various

defects. Soon it was learned that paraffin injected into various sites of the face or neck could cause very serious complications, including death, sudden blindness, unsightly disfiguration from the foreign body reaction known as paraffinoma, and other embolic accidents. Paraffin was therefore soon abandoned in plastic surgery. Curiously enough, no complication from paraffin injection

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*This is a brief survey of the history, development, and present technique of intrachordal injection of plastics for the restoration of glottal function. Teflon, silicone, and silastic have been extensively studied. Long-term results appear to be good and histologic studies are encouraging. Further experience will show which implant material will prove to be the best.*

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into the vocal cords has ever been published. It appears that the vocal cord can tolerate paraffin better than other parts of the body. I have never seen any untoward results during prolonged observation of my patients. Nevertheless, paraffin is known to be a potential cancerogenic agent, being a hydrocarbon. It is impossible to advocate it for any type of injection.

Having experienced the promptly achieved, dramatic, and lasting improvements of the voice in cases treated with intrachordal paraffin injection, I became intrigued with the search for another substance that would have the physical qualities of paraffin without its hazards. In the course of some 20 years, numerous experiments

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From the Division of Otolaryngology, Department of Surgery, University of Mississippi School of Medicine.

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have been undertaken, using many potential substances.

Autogenous nasal cartilage was ground into a powder and mixed with penicillin oil. When the paste was injected into dogs, the histologic results were most encouraging.<sup>3</sup> Patients injected with autogenous cartilage paste suspended in gelatin regained their voices and have remained well until the last time of observation. Unfortunately, the securing of autogenous cartilage, its meticulous grinding under sterile conditions, and mixing into a suitable paste proved to be so cumbersome that it could not be advocated as a generally acceptable procedure.

Various other cartilage preparations as well as bone paste of various provenience, ground and mixed with numerous modifications, all proved to be deficient in some aspects.<sup>4, 5</sup> Eventually, it was found that finely ground tantalum powder suspended in glycerin or gelatin was histologically ideal. Its use in humans was again frustrated by the fact that the tantalum powder became wedged in the Bruenings syringe, ruining many instruments. While the technique proved to be impractical, the patients treated in this manner had excellent functional results.

After long search it was found that teflon powder mixed with glycerin as developed by the Ethicon Company of Somerville, N. J., proved to be the presently optimal substance. (The official name of the product is "Ethicon PTFE Paste for Injection.") Histological studies showed its inertness. The paste is delivered in sterile tubes by the Ethicon Company and needs no further preparation. Its injection is extremely easy; the postoperative reactions are minimal, and the lasting results are very encouraging.<sup>6, 7, 8, 9</sup>

Numerous other laryngologists have accepted the intrachordal injection of teflon-glycerin-paste and confirmed the excellent results.<sup>10, 11</sup> For example, Lewy<sup>12, 13, 14</sup> reported repeatedly on this technique and lately published the pathologic study of a larynx which had been injected with teflon paste 14 months prior to the patient's death from pancreas carcinoma.<sup>15</sup> The histological analysis of the specimen demonstrated that the teflon implant had been well tolerated and that there was no indication of untoward reaction or possible malignant change. I recently studied another larynx previously injected with teflon paste and came to similar conclusions.

Despite these encouraging clinical observations, teflon paste as manufactured by the Ethicon Company is not yet available on the pharmaceutical

market. The reason is that the Federal Food and Drug Administration has introduced stringent regulations following the thalidomide disaster in Germany. Because teflon paste is injected, it is considered a "drug," whereas teflon substances used in other parts of the body, as vascular substitutes, covers of defects, or stapedial substitutes in middle ear surgery, are legally regarded as "devices" not under the FDA authority. It is hoped that with the accumulation of sufficiently long observations the FDA will soon permit the general availability of teflon paste.

For various reasons several investigators have studied the possibility of substituting other substances for teflon paste. One reason was the difficulty in obtaining the teflon paste. Moreover, it was thought that other materials might perhaps be even less irritating than teflon. In 1965, Rubin<sup>16, 17, 18, 19</sup> reported on the intrachordal injection of silicone in selected dysphonias. He found that silicone is somehow absorbed from the injection site within about six months. The precise mode of removal is not known, although it appears that silicone is excreted through the kidneys. For these reasons Rubin<sup>17</sup> stated that silicone may serve as a temporary implant for immediate improvement of the patient's chief complaints: aphonia, inability to cough, and difficulty in glottal closure for physical efforts. This procedure has the advantage that the injection is not permanent. Should vocal cord movement return spontaneously, the voice would continue to be good, while the implant will have disappeared.

Lewy and Mathews<sup>14</sup> concurred in this indication of silicone injection for the immediate temporary restoration of glottic valve function. These authors stated in 1965 that they were able to prevent emergency tracheotomy for removal of unexpectored pulmonary secretions in severely ill patients through immediate correction of vocal cord paralysis, such as following chest surgery. In the event that vocal cord movement does not recover, a permanent implant can be considered sometime later when the temporary silicone implant will have disappeared. This combined procedure has the advantage of giving the patient immediate relief from his difficulty without having to wait for the customary six months after the onset of paralysis until the permanent implant may be advocated.

Another substance that has been tried in the treatment of paralytic dysphonia is RTV silastic S-5392. Harris and Carleton<sup>20</sup> reported in 1966 on the histological comparison of teflon and silastic in animals. They concluded that silastic is



completely inert, causing no demonstrable foreign body reaction. Thus, it is the ideal implant from the histological standpoint. The chief difficulty in its administration is the complicated procedure of the preparation just before injection.

Silastic has to be mixed with a catalyst in certain proportions until a paste of desired plasticity results. This is time consuming, requires considerable experience, and complicates the technical procedure. The chief disadvantage lies in the fact that the silastic paste is sticky and hardens in the course of its chemical changes so that it is difficult to expel it from the injection syringe. These technical difficulties are similar to those encountered with the experimental substances employed during the early stages of our studies. For these reasons it is not yet possible to recommend the histologically well-tolerated silastic to replace the teflon injection procedure. Further research will show whether some substance may be found that will answer all requirements of an ideal implantation material. These requirements are as follows: the implant must be nonirritating; it must remain in place without being absorbed or transported away; it must be injectable; and it must be noncancerogenic.

### CONCLUSIONS

Even though the problem of restoring glottal function through the injection of inert plastic materials with a special technique is still in a stage of development, the consensus appears to be that the principle of intrachordal injection is valuable in the rehabilitation of patients with loss of glottal closure from laryngeal paralysis or partial resection of the vocal cord. It is to be hoped that further developments will eventually produce an ideal substance that will be satisfactory from every viewpoint.

The long-term results of vocal cord injection are good. The patients continue to have a good voice, their ability to cough has been restored, some can even sing, and no untoward reactions have thus far been encountered. Histological studies in animals and patients who died some time after vocal cord injection from other causes seem to indicate that tissue tolerance of vocal cord injection with teflon, silicone, or silastic is satisfactory. It may thus be concluded that vocal cord injection for the relief of aphonia and other laryngeal malfunction will remain acceptable until the ultimate dream of complete laryngeal reconstruction will have been accomplished: the re-innervation of a paralyzed vocal cord or the implantation of some electronic device that will reproduce the two chief laryngeal functions, glot-

tal opening for respiration, and glottal closure for phonation and expectoration. Until that dream comes true, we have reason to be satisfied with what we have achieved at the present time. ★★★

2500 North State St. (39216)

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# Radiologic Seminar LVI: The Nature and Clinical Significance of Lower Esophageal Rings

JAMES B. BARLOW, M.D.  
Jackson, Mississippi

RING-LIKE CONSTRICTIONS in the distal esophagus have been reported in 12 to 14 per cent of patients receiving thorough GI series and are felt to represent the junction of the esophagus and stomach (squamous epithelium above and gastric epithelium below).

Roentgenologically, the rings appear as deep, annular indentations, 2 to 4 mm. in length, lying at right angles to the long axis of the esophagus (Figures 1 and 2). Since these rings always lie above the level of the esophageal diaphragmatic hiatus, a hiatus hernia is by definition present. To demonstrate the ring, the esophagus above and below the constrictions must be distended to a caliber greater than the diameter of the ring, and properly obtained fluoroscopic spot films as a bolus of barium is passing through the lower esophagus is the most practical method of demonstrating the lesion. In any given patient the size and appearance of the ring is quite consistent on repeated examinations.

Surgically, the ring appears as a symmetrical, circular, wedge-shaped shelf or diaphragm protruding from the wall into the lumen of the esophagus and microscopically this shelf is composed primarily of a thickened muscularis mucosa and its mucosal covering.

Whether or not the ring produces symptoms appears related to the lumen diameter of the esophagus at the level of the constriction (Figures 1 and 2). Schatzki, who has written extensively

on this subject, reports that when the ring narrows the lumen diameter to 14 mm. or less, the patients are always symptomatic, but ring diameters of 20 millimeters or more rarely produce symptoms. Symptomatic patients usually give a history of intermittent attacks of dysphagia, occurring while eating and related to the ingestion of solids rather than liquids.

Regarding differential diagnosis, the classical esophageal ring is so characteristic that it poses no problem. The only other lesion that presents a somewhat similar appearance is esophagitis occurring above a sliding hiatus hernia.



*Figure 1. Symptomatic narrow lower esophageal ring. Note the obvious gastric mucosa below the ring.*

Sponsored by the Mississippi Radiological Society.  
From the X-Ray Department, Doctors Hospital.



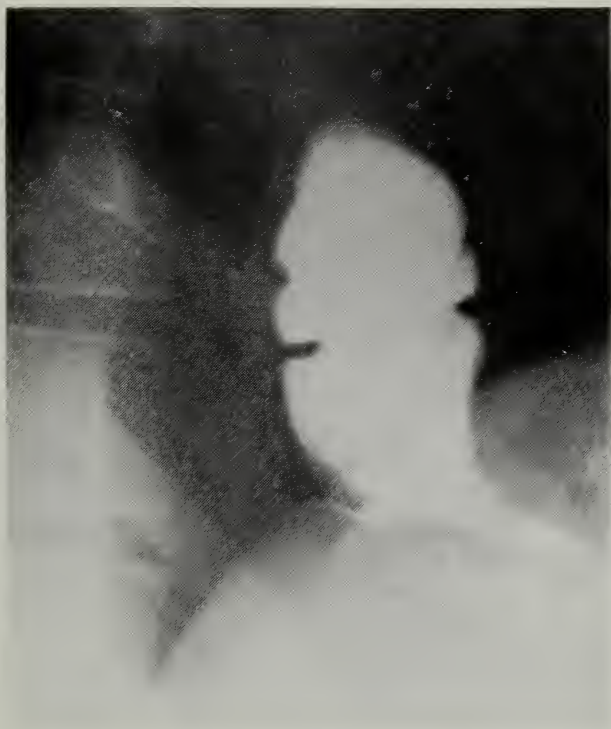


Figure 2. Asymptomatic wide lower esophageal ring, an incidental finding during a routine GI work-up.

Treatment is directed toward dilatation and rupture of the ring-like narrowing with or without repair of the associated hiatus hernia. Repair of the hiatus hernia alone will not result in symptomatic relief.

## SUMMARY

Approximately 12 to 14 per cent of people who are adequately examined have a lower esophageal ring, most of which are asymptomatic (wide ring), but a few of which are clinically symptomatic (narrow ring). The ring represents the junction of the esophagus and stomach, and practically all of them have associated hiatus hernia.

To demonstrate the ring roentgenographically, one must distend the lower esophagus with a barium bolus. Once a ring is demonstrated on a given patient, it persists unchanged.

Narrow symptomatic rings produce dysphagia which is intermittent and usually precipitated by solid foods.

The classical esophageal ring is so characteristic that it does not bear any similarity to any other lesion.

Various surgical procedures are available which give good symptomatic relief. ★★★

2949 University Dr. (39216)

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## HELPFUL HINTS

The hospital administrator had opened the suggestion box outside his office and was reading the slips.

"I wish that the medical staff would be more specific in their suggestions, Miss Jones," he said to his secretary. "What kind of kite? What lake?"



# Concepts of a New Type of Physician

WILLIAM E. LOTTERHOS, M.D.  
Jackson, Mississippi

THERE ARE FEW VALID DATA for determining trends about family practice. What few data there are relate to general practice rather than family practice. The trends relating to general practice are either stationary or downward depending on the figures used. In 1931 there were 112,000 general practitioners whereas in 1960 the number was 75,000. By 1965 it had dropped to 66,000, a loss of 9,000 in only five years. Data from the Weiskotten studies indicate that the percentage of young physicians entering "pure" general practice has remained stationary over the years at about 15 to 20 per cent. The percentage entering recognized specialty practice (in contrast to a specialty emphasis or part-time specialty practice) has gone up sharply. However, the number of specialists who are, in fact, engaged in general or family practice is not known. There may be many, and if so, the number of physicians performing some of the functions of family practice may be much larger than is generally believed.

It is certain, however, that virtually no physicians are being trained adequately or specifically for careers in family practice. Instead, physicians are being trained for the recognized specialties in increasing numbers.

The definition, as approved by the AMA Ad Hoc Committee on Preparation for Family Practice, is that the family physician is one who: (1) serves as physician of first contact for the patient, evaluates the patient's total health needs, provides personal medical care within one or more fields

of medicine, and refers patients when indicated to appropriate sources of care, (2) assumes the responsibility for the patient's comprehensive and continuous health care, (3) accepts responsibility for the patient within the context of the family (or a comparable social group) as the unit for health care.

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*In this paper, the author, who is a member of the American Medical Association's Ad Hoc Committee To Study the Education for General Practice, takes a look at the general practitioner of tomorrow. He discusses the need for a family practice specialty and considers in detail the type of training necessary for future family physicians.*

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Usually, but not always, the family physician provides medical care from more than one of the traditional specialty fields of medicine. His care is humanistic with concern for the whole patient but it is no less scientific than that provided by other specialties. It includes emphasis upon the frequently encountered illnesses, including the chronic diseases and psychosomatic or emotional problems.

The functions of a family physician make him unique and indispensable. These functions can be stated more explicitly as follows:

1. The family physician is the first contact physician for his patients. In this role he facilitates the access of the patient to medical care and to the whole health care system in his locality. As first contact physician, he identifies the urgent or emer-

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Read before the Section on General Practice, 98th Annual Session, Mississippi State Medical Association, Jackson, May 9-12, 1966.



gency problems of his patients and takes the necessary steps.

2. The family physician, himself, provides a significant amount of medical care. Generally, he will care for a high percentage of the problems presented by his patients without referral.

3. The family physician is the key to the referral process. The family physician, like other physicians, must know and respect his limitations and when indicated, obtain help either by consultation or by referral of the patient to appropriate sources.

4. The family physician is the coordinator of health services, and he interprets these services adequately to his patients and their families. He minimizes as much as possible the disruption in his patient's way of life caused by illness.

5. The family physician ensures continuity and comprehensiveness of health care.

6. The family physician helps to remove the barriers to medical care—economic, social, and occupational.

7. The family physician provides leadership for the many personnel providing services for his patients. He mobilizes all the necessary resources to provide care for his patients and, to use a cliché, he is captain of the health service team.

8. The family physician exerts leadership for improving the quantity and quality of health resources and services available in the community in accordance with demonstrated needs.

## LOOK TO THE FUTURE

It is recommended that the educational program for family practice should anticipate the future as much as possible. Although it should be based upon educational principles and methods of established value, it should not be concerned with perpetuating the status quo in a rapidly changing society.

The following premises would appear valid:

1. The attitudes and philosophies of the medical school faculties should be constructive and supportive of family practice, especially the attitudes and philosophies of the chairman of the major clinical departments. Students tend to identify with faculty members and to absorb the prevailing value systems which they exemplify.

2. The program should have significant content in the behavioral sciences. The unique functional role envisioned for the family physician draws heavily from this field.

3. Training programs for family practice should be conducted in an environment where research is fostered, research in both educational methods

and in patient care, including research in the distribution of medical services.

4. An adequate program requires an appropriate model of practice for demonstration purposes and for clinical teaching, a setting where students and house officers can participate in family practice as part of their educational experience. Example is more powerful as a teaching method than exhortation. Present programs of patient care in teaching institutions do not usually provide the necessary examples.

5. Standards for family practice training programs must allow substantial freedom and flexibility in their content and organization.

## CLINICAL SKILLS

The student should acquire the necessary clinical knowledge and skills for family practice, good judgment and an appreciation of his limitations from a sound program covering both the medical school and the intern-residency periods. The total program is necessary; a good medical school program alone or a good internship-residency program alone will not be sufficient.

The clinical experience of the student should have the following characteristics:

1. A well-supervised experience in which students and house officers
  - A. Serve as first contact physicians.
  - B. Are responsible for ensuring that medical care is available and accessible at all times to their patients.
  - C. Participate in a home-care program for selected patients.
  - D. Assume responsibility concurrently for the patients in the hospital, clinic or office, and at home.
  - E. Assume increasing responsibility for the management of patients as appropriate for their growing competence.

2. Assignments of students, house officers, and supervising faculty in the basic clinical experience, i.e., the model of practice, for relatively long blocks of time to provide continuity.

## SOCIOECONOMICS, TOO

3. Opportunity for students and house officers to participate in patient care research and to study the problems in the distribution of medical care.

4. Provision of adequate instruction in the appropriate clinical and basic science disciplines.

5. Elective opportunities in a variety of fields.

Time does not permit an adequate discussion or tentative formulation of the appropriate subject matter content for an educational program in fam-

ily practice. Perhaps it is sufficient to say that it includes the fields of internal medicine, pediatrics, psychiatry, obstetrics and gynecology, surgery, community medicine, and the basic sciences with prominence given to the behavioral sciences. The emphasis should be upon breadth of comprehension rather than depth in a narrow field or a high degree of technical proficiency in all of the fields. Those who wish to do highly specialized procedures and to handle problems of unusual difficulty whether in the surgical or medical fields must take additional training.

Ideally the student should obtain much of his clinical experience in a setting quite different from that now usually available. The setting, or model of practice, should consist of a generalized clinical service in contrast to one that is organized around conventional specialty services. This service should provide care not only for patients in the acute general hospital but also for ambulatory patients, patients at home and those in long-term care institutions such as nursing homes. Students would spend considerable time outside the base hospital with patients in these other settings.

### COMPREHENSIVE CARE

This service should provide continuing and comprehensive care for a defined group of families that represent, if possible, a cross section of the community according to its various social and economic characteristics. The population group should be large enough to meet the teaching and research needs of the program.

Patients should be cared for according to their medical needs. They should be evaluated as they come by the family practice students, house staff, and teaching staff with the assistance of other specialty consultants as indicated. Patients should be managed by the family practice staff in the clinic or office, the patients' homes, the hospital, nursing home or other institutions, as appropriate. Patients requiring care by other specialists should be admitted or transferred to the proper specialty service in the hospital or clinic if they cannot be cared for satisfactorily by the specialist on the family practice service. However, the responsible family practice staff member and student should continue to follow these patients while they are on the specialty services and at the appropriate time these patients should be returned to the family practice service.

This service should have full-time medical direction with an adequate faculty and staff of both

full-time and part-time or voluntary physicians who are academically qualified and highly competent in family practice.

If the intern-resident could have a relatively long block of time on such a service he would not need, necessarily, a rotating assignment to each of the specialty services which provide subject matter content for family practice. Such specialty assignments would be made to help the house officer acquire additional depth of knowledge and skills according to his needs and interests. The house officer's medical school experience, his demonstrated competence, his interests, the anticipated scope of his practice and the educational resources available to the institution offering the training, all would be considered in developing an individualized and flexible program for the student.

### QUESTIONS ARE POSED

I have summarized some of the current thinking to date. It raises a number of questions, and the answers to these questions will determine whether or not the AAGP and AMA are on the right track and the nature of the recommendations that they will make ultimately. Some of the major questions follow:

1. Can a model of practice such as that visualized be created, in fact? Can a generalized experience for students, such as that described, be provided? Can this be done in the setting of a university hospital? In the setting of a community hospital? Will medical schools support the development of such a model? Will the medical profession cooperate in helping the schools to obtain a suitable population group for the family practice program and to work out amicably the problems involved in what may seem to be competitive medical practice?

Can other clinical resources such as group practices and occupational health programs provide a suitable model of practice and can they be used effectively for teaching family practice? Does a preceptorship with a family physician provide a suitable model and does it have a valid educational role? If so, what are the criteria for defining and evaluating an acceptable preceptorship?

### FAMILY PRACTICE RECOGNITION

2. If family practice is to attract medical students and if the educational program is to be effective, does not family practice need organizational recognition for program administration within the medical school and teaching hospital? If so, this might be achieved in several ways, through a department of family practice and a



family practice clinical service, through a division of a major department and clinical service such as medicine, through an inter-departmental unit, or perhaps, in some other way. If organizational recognition is provided, does this not mean that the family practice unit must have prerogatives equivalent to those of other major clinical departments and services in the medical school and teaching hospital? How would such a unit relate to other departments and services? How could the quality, effectiveness, and prestige of the family practice unit and its clinical service be ensured?

3. If family practice merits academic recognition in the medical schools with an organizational identity, can a staff of competent family physicians with valid academic qualifications be recruited? If staff of this character cannot be found there would appear to be little chance for the recognition of family practice in the academic world. The medical schools will not and should not tolerate two levels of academic competence.

### ACADEMIC CAREERS

Some people feel that there are physicians with academic potential, interested in family practice and the problems of health care in modern society, who would like an academic career but see no future in academic medicine as it is now organized. Such people, if they exist, might be recruited if good academic opportunities were available. If there are such physicians, how can they be identified and can suitable academic opportunities be provided? How can we train physicians for academic family practice and where can the training be provided? In short, how can we solve the academic manpower problem as it applies to family practice? This is essential if new programs are to be initiated.

4. Even if effective programs for family practice are developed is the environment of practice such that students and young physicians will be attracted to and held in family practice? It is felt that there are many attractive features to family practice, but that students often fail to learn about them before they are committed to other fields. However, there may be measures which will help to overcome any problems and will enhance the environment of family practice. Some questions have been raised. These are being answered in many places but they need asking in others. For example, can the issue of suitable hospital privileges be resolved sufficiently to eliminate this as a barrier? Are there sufficient opportunities for professional stimulation and continuing education for the family physician?

5. As family practice has been defined by the Ad Hoc Committee of the AMA, should it be considered a specialty field of medicine? If it were recognized as a specialty, would this add to the prestige and status of the field and would it be helpful in attracting young physicians to the field?

### SPECIALTY BY FUNCTION

The Ad Hoc Committee is inclined to believe that family practice should be considered as a specialty, one that is characterized primarily by its function rather than by its subject matter content. Family practice, as defined by the Ad Hoc Committee, is not likely to be practiced well by the physician who lacks proper preparation. Of course, there are excellent practitioners of family medicine who have not had the preparation visualized by the committee, preparation which emphasized continuity and comprehensiveness of patient care in the family context, but this is likely to be the exception rather than the rule. There are also competent physicians in other specialties who did not have adequate training by current standards, but this does not deny the value of proper training nor the appropriateness of specialty recognition for those who have been properly trained and have demonstrated their competence.

If this thinking is correct, how should the specialty of family practice be recognized? By a new specialty board of family practice? By an existing board? By some other method? If family practice is a specialty, is there any reason why it should not be recognized by its own specialty board, having the same prerogatives and responsibilities as other specialty boards?

6. Finally, how can we finance adequate programs for the preparation of family physicians? If the Ad Hoc Committee is correct in its tentative thinking, substantial money will be required for developing adequate programs, for faculty, for research and training, and for conducting appropriate patient care programs to serve as models of practice.

### WHAT IS THE NEED?

Is the national need for family physicians as great and as critical as the Ad Hoc Committee and as the public apparently think it is? Is the national need similar in importance to that which the nation faced for research programs and investigators after World War II? Does the preparation of family physicians and the nurturing of family practice deserve a high priority in the commitment of national resources similar to the priority for research since World War II? If so, do these questions suggest the appropriate kinds of

action for government, for voluntary health agencies and foundations, and for the medical profession itself in marshalling the resources necessary to meet the need?

To sum up my concepts of a new type of physician, the future family physician would be astute in diagnosing in all fields of medicine, his management and treatment would be limited to his capabilities within the scope of his training, he would serve as confidant and counselor for the individual and family in most areas that he could competently learn to do in the given period of education.

His training would take place in all available hospitals and institutions, private and public; the

program would have the blessing of the medical schools, and the staff would have the qualifications as recommended by the medical educators. Once this individual is educated, he would best serve in groups and a definite time should be allowed in his schedule for re-education at the post-graduate level, having in mind a recertification mechanism in order that the practitioner may stay abreast of the changing times in medicine.

It is hoped that this type of family physician would eventually replace the general practitioner of today. There would be many who are now practicing general practice who could qualify as a family physician of the future, and in certain instances be eligible for special board recognition when such comes to pass. ★★★

4660 McWillie Dr. (39216)

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## AH, SO!

The Japanese physician was especially confused by a paper he heard while attending the annual meeting of the American Academy of Ophthalmology. He had always thought that a cataract was an expensive American automobile.



# Clinicopathological Conference LXXXIII

Conducted by the Department of Pathology  
University of Mississippi School of Medicine  
Jackson, Mississippi

DR. JAMES R. JACKSON: "The case today is that of a 58-year-old Negro female who was admitted to the University Hospital with a history of coma and seizures. We are told that she had been nervous for two or three years and on occasions had talked out of her head. For the two months prior to admission she had been bedridden and apparently had had the first of many seizures, which was described as jerking of the right side of the body. She was hospitalized in a local hospital for evaluation and no specifics of this hospitalization are known.

"A month before her admission she was described as having drawing of the right side of her body, tremors of the upper extremities, and continuous disorientation. The day before she was admitted she was said to have become completely unresponsive and apparently had a generalized seizure and continued to have generalized seizures intermittently during the 24 hours prior to admission at the University Hospital. At this time she was again seen by her local physician and noted to have a temperature of 103° and was given 100 mg. of Demerol and 2 cc. of penicillin-streptomycin and then referred here.

"The patient had a history of chronic hypertension for which she had been taking red and white heart pills, but apparently she had been on no medication in recent months.

"Here we have a 58-year-old woman who for two or three years has been confused and certainly this would suggest something going on in the frontal lobe or thereabouts. There was also a two months' history of a convulsive disorder which was initially focal in the left brain as manifested by peripheral Jacksonian seizures on the right. Later she had generalized seizures which would suggest a diffuse, spreading irritative lesion. There

was no mention of headache or vomiting which would suggest a chronic, progressive increase in intracranial pressure, but at this point I think we should be suspicious of an expanding neoplasm in the posterior frontal region.

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*In CPC LXXXIII, Dr. James R. Jackson discusses the case of a 58-year-old Negro female admitted to the University Hospital with a history of coma and seizures. Dr. William M. Flowers, Jr. gives the radiologic report and Dr. Carl G. Evers the autopsy report.*

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"When she was seen here, examination showed a temperature of 103°, pulse of 100, respirations 24, and blood pressure 100/60. As a rule, hypertension bradycardia usually indicates a markedly increased intracranial pressure. This I don't think would be suggestive of marked increased pressure at this point. She was said to have myoclonic activity of all extremities and the neck was quite stiff. Now the stiff neck may be related to meningeal irritation either from a chemical component of blood and/or high protein content in the spinal fluid or perhaps the cerebellar tonsils herniated down into the foramen magnum. She was described as being comatose but would respond to painful stimuli in all extremities. No papilledema was described, and the pupils were said to be very small and unreactive. This may have been related to the Demerol that she received, or it may be related to some brain stem signs.

"The eyes were described as being fixed and conjugately deviated to the left. This to me would indicate an irritative lesion in the posterior area

8 frontal on the right or perhaps a paralytic lesion on the left side so that the eyes were deviated to the opposite side. It was further stated that she had marked increase in muscular tone and was in a continuous state of spontaneous rhythmic myoclonic activity in all extremities. Sternal stimulation produced decerebrate rigidity with increased deep tendon reflexes throughout. Again this would point to a lesion at least as high as the mid-collicular area producing brain stem signs. At this point I think one would be suspicious of some brain stem difficulties from direct hemorrhage or secondary changes in the brain stem from supratentorial pressure with perhaps some coning of the tonsils in the foramen magnum.

### LABORATORY FINDINGS

"Significant laboratory data on admission showed a hemoglobin of 15.6 gm. and a BUN of 47 mg. per cent, sodium 154 mEq., chloride 121 mEq. The urine showed a specific gravity of 1.033 and a 2+ proteinuria. The microscopic examination of the urine was essentially negative. These findings, I think, would be compatible with the mild dehydration and the chronic illness. Skull films were obtained and these were reported as being normal. The lumbar puncture was carried out with the findings of Xanthochromic fluid with a protein of 1,766 mg. per cent. No cells were mentioned. Spinal fluid glucose was 99 with a concomitant blood glucose of 185 mg. per cent, which is essentially within the range of normal and would tend to deter from a diagnosis of meningitis. There was no mention of any pressure being taken.

"We are told that the next day the puncture was repeated and the opening pressure at this time was 300 mm. of spinal fluid which revealed 14 cells, 11 polys, 3 lymphocytes and 183 RBC's. It was not stated whether or not these red cells were fresh or crenated. With a bloody tap we usually have a ratio of about 500 to 1, and I think that this pleocytosis perhaps was related to the irritation of the high protein in the spinal fluid. On the second puncture the protein content was 980 mg. per cent and at this time was noted to clot in the tube as is the case with a high protein spinal fluid. Usually when it gets up to 600 or 700 mg. per cent, it will clot. We are told that the stains for acid fast bacteria were negative, and later on, cultures were reported as negative for acid-fast bacteria and fungi.

"Subsequently the BUN rose to 111 mg. per

cent and the creatinine to 4.4 mg. per cent. This may have been related to a chronic debilitated state, kidney disease, or elevation from a central origin. But with the negative microscopic examination on urinalysis, I would tend to believe that this was not related to a kidney disease. Five days after better hydration, the hemoglobin came down to 10.8 gm. and the BUN to 25 mg. per cent and the creatinine was normal. We are told that serum calcium and phosphorous and serum electrolytes were likewise within normal limits. She was admitted as a brain stem vascular accident, and the following day a bilateral carotid arteriogram was carried out.

"Dr. Flowers, could we see the chest films, skull films, and arteriograms?"

*Dr. William M. Flowers, Jr.:* "The chest film shows some uncoiling and a little tortuosity of the aorta and not much else. These findings are not thought to be significant or pertinent to the present case. The PA skull film appears quite normal. The lateral film is also thought to be normal. However, the arteriogram shows what we believed to be a fairly well-demarcated abnormal area. Following injection of opaque medium, the AP films showed a very definite increased density that might well be a stain which usually means a tumor. This is most obvious on the right side. A similar area is present on the left but is not nearly as prominent. I do not see a stain on the lateral projections.

"When we first read the films, we suggested the possibility of tumor stain, and recommended a brain scan. I suppose that the patient was too sick for this procedure, but nevertheless, when all the indicated studies can be done together and read together, they enormously increase our diagnostic accuracy."

### AP PROJECTION

*Dr. Jackson:* "I certainly agree there appears to be a stain on the AP projection up near the midline, particularly on the right side and to a lesser degree on the left, and as noted, there is a shift of the right middle cerebral on the lateral view in the upward fashion. There is no late venous phase on the lateral projection, which I think would probably have been of benefit. We could have seen the venous angle as formed by the thalamostriate vein and the internal cerebral vein or perhaps picked up a stain on the lateral projection. I think also that perhaps there is some suggestion of a mild hydrocephalus as evidenced by the wide sweep to the anterior cerebral as it comes around the corpus callosum. I didn't think that the pericallosal and the callosal marginal



arteries on AP projection were separated, but it may have been the phase of injection.

"At any rate she was given supportive care. Her temperature ranged between 103-105, and she was noted to have a decreased urine output and a fall in blood pressure down to 90/50. I am not sure in my own mind why this happened. She was started on neo-syneprine drip and placed in hypothermia blanket. She continued with myoclonic jerks in all extremities and Dilantin 100 mg. and Phenobarbital 100 mg. were started every six hours. These came under better control. The next 24 to 36 hours her condition gradually improved on this regimen. The third day she was noted to have Cheyne-Stokes respirations and on the fourth hospital day because of the possibility of a brain stem or posterior fossa tumor, she was started on steroids.

### CLINICAL COURSE

"At this same time she was noted to be some better. She moved her head, carried out some simple commands but remained quite spastic in her extremities. On the sixth day she was said to have moved all extremities and on the eighth day she even attempted to speak. At this time her blood pressure fell to 70. The pulse was 64. She had a grasp reflex bilaterally with marked spontaneous clonus. She could move her eyes laterally to commands but no vertical or downward component of the eye movement was noted. She was also noted to have bilateral facial palsy. She could not open her mouth, was decerebrate and did not seem to perceive pain below the neck line. She became less responsive, continued with increased spasticity and had a fall in blood pressure. There was a rapid rise in temperature despite the hypothermia blanket. This was the beginning of the end and she expired quietly on the 10th hospital day.

"Now how are we going to try to put all this together? Most CPC's are presented to show an unusual lesion or a lesion that was missed by the clinicians. I will go out on a limb and place this lesion in this particular patient in the body or the splenium of the corpus callosum with extension to the cerebral hemisphere and down to the basal ganglion. Statistically, this should be a glioma of the corpus callosum—the first choice being a glioblastoma multiforme, followed by a lower grade astrocytoma, oligodendroglioma, ependymous or lipoma. I doubt very much if this is a lipoma because they are usually calcified and have a rather distinctive x-ray picture. There is also a very good possibility that this could be a falx meningoma

arising from the same area with compression down into the corpus callosum.

"Reading an abstract or chart does not convey as complete a clinical picture as when the patient is examined, but I couldn't help but wonder if a mercury scan or ventriculogram would not have delineated this lesion more clearly and perhaps some surgical intervention may have been of some benefit. Tonnis has shown that cerebral arteriography on occasion may not completely delineate a lesion in the area of the corpus callosum, and it is quite frequently necessary to resort to ventriculography.

"Davidoff and Dyke back in 1936 established the pneumoencephalographic features of tumors of the corpus callosum which were (1) separation and asymmetrical distortion of the lateral ventricles, (2) sharp defects in the lateral margins of both ventricles, (3) occasional failure of one lateral ventricle to fill with gas, (4) distortion of the sulci and convolutions of the medial aspect of the brain and, (5) deformity or obliteration of the dorsal and rostral part of the third ventricle.

"Alpers and Grant in 1931 considered that the diagnosis of tumor of the corpus callosum was possible clinically and postulated the syndrome that they thought was clear without being absolutely characteristic. In contrast Voris and Adson in 1935 reviewed 17 primary and 21 secondary tumors of the corpus callosum and concluded that the symptoms and neurological findings were so complex and varied that accurate and clinical localization was impossible without pneumoencephalography.

### CORPUS CALLOSUM TUMORS

"Brain states that tumors of the corpus callosum are not common, yet he feels that they yield a distinctive clinical picture. Mental symptoms are prominent and are often the first symptoms noted. Apathy, drowsiness, defect in memory, and confusion are most prominent. Focal and generalized convulsions may occur because the situation of the tumor in the midline extending laterally into the central white matter on both sides leads to early damage of the pyramidal tracts. This is usually asymmetrical in the early stages, and it is then common to find a hemiplegia on one side or seizures while the other side exhibits changes resulting from pyramidal tract lesions with loss of motor functions. Later a double hemiplegia may be found and tumors extending anteriorly may cause frontal lobe signs and indeed grasp reflex. Tremor and choreiform movements sometimes occur and are probably related

to involvement of the basal ganglion. Signs of increased intracranial pressure are often late in developing and the protein contents of the spinal fluid is usually quite high.

"This patient did have evidence of increased intracranial pressure. I think that with the seizure activity and the expanding intracranial lesion that intracranial pressure went even higher and the lumbar punctures may have exaggerated already present brain stem signs. With hydration, the brain probably became swollen but with the steroids along with the anti-convulsion medication controlling seizures, the brain became more lax and she showed some transient signs of improvement. Despite this, she continued to deteriorate, exhibiting brain stem signs, decerebrate posturing, bilateral facial palsies, a paralysis of vertical movement of eyes—all signs of brain stem damage. She expired quietly.

"My final diagnosis would be a glioma of the corpus callosum with the possibility of a falx meningioma in the same area an outside chance."

### SUMMARY

*Dr. Carl G. Evers:* "Does anyone have any comments or questions? This case is presented as a CPC as a case for specific discussion. Contrary to popular opinion, not all of our CPC cases are selected because of odd or missed diagnoses. One criteria for a good CPC is the discussor's preparation for it; I think today certainly bears that out.

"The students were a bit more reticent to localize this lesion. The majority opinion was intracranial neoplasm, with brain stem glioma the second choice. The pertinent findings were pretty much limited to the brain and were as surmised by Dr. Jackson. The brain weighed 1,230 gm. which is within the normal range. Externally it was essentially unremarkable. There was very little evidence of edema or swelling. There was no cerebellar tonsillar coning or herniation, or evidence of herniation through the tentorium. Although she undoubtedly had increased intracranial pressure, this was not of a degree to produce herniation.

"There was a neoplasm arising in or involving the entire corpus callosum, extending downward to involve the fornices which were nearly completely obliterated in some areas. It extended laterally into the white matter on both sides, especially anteriorly, more extensively on the left side where there was an area of hemorrhage and ne-

crosis in the white matter adjacent to the corpus callosum. Grossly it was difficult to define the borders of the tumor because of the characteristic diffuse infiltration. It did involve the internal capsule on the left. The cortical grey matter of the supracallosal gyrus was also involved. The third ventricle was nearly obliterated by compression. The head of the caudate nucleus on the right was involved. The lateral ventricles were dilated due to obstruction of the third ventricle. The tumor did not extend downward into the brain stem; sections from the cerebral peduncles, red nucleus and substantia nigra were free of tumor.

### DESCRIPTION OF TUMOR

"Microscopically, this was a glioma. More specifically, the proliferating tumor cells were astrocytes. Although there were no giant cell forms with numerous mitotic figures that one usually associates with a glioblastoma, there was a fair amount of pleomorphism. There were foci of necrosis with palisading of surviving cells around vessels, one criteria for glioblastomas. There was also malignant vascular proliferation. A striking feature of this particular tumor in this case was the infiltration and widespread involvement of the leptomeninges or arachnoid. Foci of tumor bridging between the cortex and the arachnoid were present, and there was tumor involving the arachnoid around vessels deep within the brain. In other sections, the tumor extended beneath the ependyma lining the ventricles. The most distal section, through the level of the inferior olive below the level of the fourth ventricle, showed no tumor within the brain substance, but the meninges were involved anteriorly.

### FINAL DIAGNOSIS

"In summary, our diagnosis is a glioblastoma multiforme involving primarily the corpus callosum, but extending laterally on both sides into the adjacent white matter and downward to involve the fornices. Probably the bulk of the tumor, and more specifically, the area of extensive necrosis, was on the left side. Whether this can be correlated with the vague right-sided findings, I don't know. This particular lesion was so extensive that I doubt if surgical intervention would have accomplished anything other than a tissue diagnosis. Does anyone have any other comments?

"If this patient did have hypertension, which there was no reason to suspect on this admission, clinically, it was not manifested by the usual cardiac hypertrophy or significant vascular dis-



ease. The heart was a normal size and there was really not much in the way of atherosclerosis for a patient this age. There was one other finding, the right lower lobe was infarcted as the result of the fairly recent embolus to the right lower lobe. It probably occurred within the last 24-48 hours, and I don't think there is anything in the clinical summary here that would allow us to pinpoint any particular time that this occurred."

*Dr. Jackson:* "Missing the diagnosis in this individual really did not mean too much if you consider the evidence of large series of cases of glioblastoma. I reviewed about 275, and the mean survival of this group was four months plus or minus two months. So, if they are lucky, they may go six months and if they are not so lucky, they will go two and it's a good chance that going in there trying to get a biopsy in that area would have really stirred up a hornet's nest."

"Now what about the use of steroids in this type of tumor? I think it has a very definite place because if you make a diagnosis of a glioblastoma and it takes six weeks to get the cobalt in and they have two months to live, then they have shot up six out of eight weeks of life expectancy. At the same time you are irradiating this area, this brain may be swelling and there is good evidence that Decadron or one of the steroids in gradually increasing dosage will keep the pressure down. I think that this is the case in this lady because she had no signs of uncal herniation or tonsular cone. You can actually see these people when they get

into the stage of their disease where they have been irradiated, have tremendous headaches and papilledema and you put them on about 17 mg. of Decadron twice a day—you may have to go up to four times a day on this. They will say they have a headache, but it does not bother them much. They will eat and actually live a very comfortable terminal existence. So this is something to keep in mind in the treatment of these type tumors."

*Dr. Jackson:* "A scan would have 'lit up' this lesion, but I think this was actually present on arteriogram. Certainly if a ventriculogram were done the ventricles would have been easy to hit posteriorly and it would have shown the classical findings of a lesion in this area. I think nowadays we often don't use air studies enough. A lot of times we operate just on the basis of a history and neurological findings and the scan. Occasionally we do an arteriogram to see how vascular it is. There are so few pneumoencephalograms done these days that we forget the normal anatomy of the ventricular system. Arteriography was not perfected until after ventriculography so they would do a ventriculogram and make the diagnosis. The progress of neurosurgery in the treatment of tumors in the last 30 years has progressed very little; of course, there has been improvement of surgical skills and anesthesia. The brain scan has been of tremendous help, but a pneumoencephalogram, when done properly, is still a very good test." ★★★

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## U.S.P.

The FDA has just approved a new wonder drug which passed all the tests with flying colors. It is absolutely harmless and has no side effects whatsoever. Unfortunately, it doesn't cure anything, either.



# The President Speaking

## 'The Battered Child'

JAMES T. THOMPSON, M.D.

Moss Point, Mississippi

THE BATTERED CHILD LAW bids to become one of the most significant legislative enactments of the 1966 regular session of the legislature. The state medical association can take understandable pride in the law, because it was written and sponsored by physicians. In fact, we stood alone in quest of its passage for two years.

Recently, representatives of our association met with chancery and youth court judges, law enforcement officials, key leaders of the Mississippi Department of Public Welfare, and hospital representatives to plan full implementation of the law. Within the week, association representatives will appear before the 8th Annual Meeting of Chancery and County Judges at Biloxi to participate in a full day of discussion on the battered child.

This important measure amends the Youth Court Act and provides not only for action in battered child cases but also in instances of neglect as well. Reports and investigations are returnable to the courts, and there will be professional investigation of the circumstances of the harmful environment in which a child has suffered. In meeting the mandatory reporting requirement of the law, physicians and others specified are immune from either civil or criminal liability. Judges have already expressed satisfaction over the strength of the Mississippi law, in contrast with weaker statutes in many other states.

We will be hearing more of the law as the program is developed. We who initiated this enactment have a first responsibility in making it work.

★★★





## Title XIX: Challenge for Judgment, Demand for Decision

### I

MEDICARE'S TITLE XIX, an inclusive program of health and medical services for the indigent, is beginning to receive the study, attention, and discussion which its significance, impact, and scope within the socioeconomics of medical care demand. The savants, sages, and prognosticators notwithstanding, nobody can, at this moment, predict with any accuracy how many Americans will eventually receive Title XIX benefits, because final eligibility criteria are left to the states.

Between January and August of 1966, Title XIX programs were made operational in 26 states among which 13 state plans had the approval of the Department of Health, Education, and Welfare's Bureau of Family Services. Another five states, the Virgin Islands, and Guam expect to implement the program in 1966. Others are making beginnings; some are not.

Significantly, this is a far greater implementation rate than was experienced with Kerr-Mills in the 1960-61 era. But where Kerr-Mills contained incentives and was permissive, Title XIX offers still greater incentives but carries the teeth of two deadlines. And not to be overlooked is the action of 24 states which have purchased Part 1-B supplementary medical insurance for the indigent over age 65 and another 14 states which have increased public assistance cash benefits so that recipients can purchase their own.

Altogether, there are only nine states where part or all of Title XIX has not been made effective or will be in 1966. These are Alabama, Alaska, Georgia, Kansas, Mississippi, Missouri, New Hampshire, North Carolina, and Oregon.

### II

Title XIX is simple in principle and exceedingly complicated in description. The gist of the law is that it provides medical care for those with a determined need based upon the means test erected by a state legislature. As would be expected in any matching fund program, there are minimums and floors as well as ceilings and maximums. Another way of describing Title XIX would be to say that it consolidates the several vendor medical programs which have existed since 1950 and concomitantly extends the Kerr-Mills program to those under age 65.

When the Congress passed the Social Security Act in 1935, there were four titles encompassing as many categories of beneficiaries to whom state-federal cash benefits might be paid. These were the aged (Old Age Assistance, Title I), families with dependent children (Title IV), the blind (Title X), and the permanently and totally disabled (Title XIV). From 1935 until 1950, the benefit monies were paid directly to recipients by the state with the hope and expectation that part of it would be used to purchase needed medical care. It just didn't work out that way.

## EDITORIALS / Continued

In 1950, the Congress amended the four titles to permit states to withhold a portion of the monthly cash benefits and to pool these for payment of medical care. Since these payments were paid directly to the sources of care, meaning physicians, hospitals, and others, the program became known as "vendor medical care," in the sense of the seller or vendor. The program was permissive, as it remains today, and could not be implemented in any state unless the legislature, by an affirmative act, willed it so.

After other amendments which altered procedures but not principle, Kerr-Mills entered the scene in 1960. Here, then, was a category of matching funds exclusively for medical care. As is universally understood, Kerr-Mills applied to those over age 65 who received no Old Age Assistance but who might need help in paying for part or all of needed medical care. It was supported by AMA and every state medical association.

### III

It was against this background that Title XIX was enacted in Public Law 89-97. It has been called a 10 year program for the development of full medical services for all ages and classifications of the indigent and medically indigent, if the latter is a valid description.

Title XIX consolidates into one program the four categories under the old vendor medical care program. In addition, it includes those individuals who, if sufficiently needy, could qualify for cash benefits under the old age, dependent child, blind, or disabled categories. Third, Title XIX will eventually include those between the ages of 21 and 64 who would not qualify under the four welfare titles.

To finance the program, federal matching funds are made available to the states on an economic index formula ranging from 50 to 83 per cent of the program cost. Thus, the "rich" states of California, Illinois, and New York receive 50 per cent of the program costs, while the "poor" states receive more. Mississippi alone qualifies for 83 per cent. Of the 13 approved Title XIX programs, the federal share ranges from 50 per cent in California, Illinois, and New York up to 79 per cent for Louisiana where the \$45 million program in fiscal 1967 will cost the state \$8 million.

### IV

Eligibility for care under Title XIX varies notably from state to state. Income limits are set

from Oklahoma's family-of-four at \$2,448 up through California's \$3,800 to New York's extravagant \$6,000. In the latter case, the state has placed a deductible (permitted under the law) of 1 per cent of income above \$4,500.

Portions of state populations covered by Title XIX are well documented in 10 states. The low is 8 per cent in the state of Washington, some 250,000 individuals, to a high of 52 per cent in Minnesota, 1.9 million. In states approaching the population size and economic level of Mississippi, Oklahoma has 16 per cent covered for a total of 389,000, while Louisiana has 4.5 per cent or 156,000. One credible estimate of Mississippi pegs initial Title XIX coverage at about 30 per cent or 600,000 citizens.

The degree and extent of Title XIX development is invariably related both to matching fund incentives and the timetable contained in the law. The latter tells the implementation story:

*January 1, 1966*—Title XIX may be implemented in full or part or states with the old vendor medical program may continue as before.

*July 1, 1967*—From and after this date, all Title XIX programs must include as a minimum:

- (1) Inpatient care in a hospital.
- (2) Outpatient hospital services.
- (3) Other laboratory and x-ray services.
- (4) Skilled nursing home services (except for children).
- (5) Physicians' services, whether rendered in the office, hospital, home, nursing home, or elsewhere.



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*January 1, 1968*—This is the deadline for “buying in” Part 1-B supplementary medical insurance for those over 65 who are receiving Old Age Assistance payments.

*January 1, 1970*—The final deadline for putting Title XIX into effect. States without such a program will thereafter receive no federal funds for health care purposes under Social Security titles. Of course, this does not apply to Title XVIII.

*July 1, 1975*—The third portion of Title XIX must then be effective covering needy individuals between 21 and 64 at state expense in order for a state to continue to receive federal grants.

Surveys recently completed on 14 Title XIX programs showed eight states as already offering the “basic five” services plus dental care, drugs, home health services, appliances, eye glasses, transportation to care, and preventive, diagnostic, and rehabilitative services. The other six states were in the process of developing the basic five services.

# V

Title XIX is not without its bugs and rough edges, either. The burning question of free choice remains, since the law neither requires nor forbids it. AMA is working diligently for a free choice amendment to Public Law 89-97. Many states are putting it in their enabling acts. Some local controversies have shown up over professional compensation for physicians, because a few states have stayed with the old, low welfare fees. The law does not specify a rate of reimbursement for physicians, other than to demand that the fee range be sufficiently attractive to assure participation in the program by two-thirds of the physicians in any state. A state enabling act can specify such fee at a prevailing, reasonable rate.

The 1966 National Governors Conference gave serious consideration to Title XIX last July. The chief executives agreed that every state should examine its own situation as to Title XIX and, if it is approved, determine what groups should, under state law, be made eligible. The governors felt that each state should determine the scope of services to be offered and to decide how the state shall administer the program. They concurred in each state’s deciding for itself the most appropriate fiscal structure and when, within the statutory deadlines, the program should become effective.

The law permits the state to make these de-

cisions, but it does tell them that the decisions must be made—and when.

Title XIX is more than a program over the medical horizon: It is a decision facing the medical profession, its professional allies in the health care field, and the several states which have not yet acted. This decision, however made, demands the considered judgment of every doctor of medicine.—R.B.K.

## The Unconscionable Cost of Disability

The state medical association’s Committee on Occupational Health has long emphasized the urgent need for following through from care of acute conditions to the best attainable degree of rehabilitation, retraining if necessary, counseling, and employment placement. It is readily seen that disability is costly—to the unfortunate individual, to his family, and to society.

A new yardstick for measuring the costs of disability, death, and loss of productivity and earnings has been suggested in a study by Dorothy P. Rice, a U. S. Public Health Service economist. For the year 1963 which is covered in her study, Dr. Rice puts the gross cost of disability, death, and other associated losses at \$105.2 billion. The sums are conservative, market-value amounts di-



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**COMPOSITION:** Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

**ADMINISTRATION AND DOSAGE:** Dosage, based upon body weight and Gm. Hb/100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. Initial test doses are advisable. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

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**CONTRAINDICATIONS:** Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only it is contraindicated in other anemias.

**CARCINOGENICITY POTENTIAL:** Using relatively massive doses. Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

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rectly related to the 1963 economy and gross national product.

The cost of disability and death totaled \$34.3 billion. Losses to the national economy because of disability came to \$21 billion and those losses from death hit \$2.7 billion. Loss of future earnings of the disabled—again conservatively pegged at 1963 levels—are estimated at \$47.2 billion.

At 1963 prices, this appalling loss is the equivalent of a sixth of the gross national product. The same amount today, despite inflation, scarce money, high interest, and a semi-war economy would amount to almost 15 per cent of the gross national product.

This is too high a price for even the richest nation on the face of the earth, and it is one which we soon will be unable to pay in any event. Although such losses obviously can never be avoided altogether, medical science has the means to reduce them. The association's committee chose a wise direction in stressing rehabilitation, and this policy is deserving of full support by all.—R.B.K.

## Really, Mr. Harvey!

Of all people in the world who should be least likely to swallow and accept the fallacy of chiropractic, Paul Harvey, the distinguished commentator and lecturer, should just about head the list. He is erudite, fluent, alert, courageous, and generally endowed with all the qualities which we admire and respect in an individual. But Mr. Harvey puts in a good word of advice to and a low pressure plug for chiropractors in his news column published Oct. 18.

Really, Mr. Harvey!

In the column, he recites the blast hurled at the cult by the Third National Congress on Medical Quackery. Then he proceeds to say that "some of the manipulation and massage which characterizes their (the chiropractors') profession is helpful in treating certain discomforts." He goes on to say that "doctors"—presumably, meaning physicians—prescribe and administer the same treatment under the name of physical therapy. Now, this is not factual, and any physician or trained physical therapist will so attest.

Mr. Harvey offers advice to the chiropractors and exhorts them to get together and stop blasting each other. He seems to be overlooking the overwhelming proof against this cult which claims to cure disease entities by punching the spine. As a matter of fact, this column is peculiarly devoid

of any discussion of the chiropractor's belief as to the cause of disease which is a pinched nerve or "subluxation." He even mentions that chiropractors are licensed in 48 states.

It is to be hoped that this able and distinguished American will take the time to enlarge his vast and impressive array of knowledge by informing himself on exactly what chiropractic is.

And until such time, Paul Harvey, good day!  
—R.B.K.



## PERSONALS

ROBERT H. BARNES of Natchez has announced his return to full time practice of general and thoracic surgery and the removal of his offices to the Medical Arts Building.

PERRIN L. BERRY of Jackson has retired from office as president of the Hinds County Heart Association. He was succeeded by J. J. Hurst of Jackson.

KENNETH D. DRAPER of Iuka has become associated with KELLY S. SEGARS and BOBBY F. KING in general practice at the Iuka Clinic.

A. LEWIS FARR of Greenville has been elected chief of staff of the Washington County General Hospital for 1966-67. Other officers of the staff are PAUL C. HORN, vice chief, and J. COLLINS WILLIAMS, secretary. Clinical departments of the hospital are headed by I. A. NEWTON, JR., chief of medicine; JEROME B. HIRSCH, JR., chief of surgery; and ROBERT E. BLEDSOE, chief of obstetrics and gynecology.

RICHARD H. FLOWERS has announced the opening of his offices at 308 Fulton St., Greenwood, for the practice of dermatology. He will also direct the newly organized plasmapheresis program at Parchman State Penitentiary.

J. MANNING HUDSON of Jackson served as a delegate to the American Heart Association annual meeting and scientific assembly at New York. HERBERT G. LANGFORD, professor of medicine at the University Medical Center, presented a paper before the scientific assembly.

THOMAS L. KILGORE, JR., has become associated with the Surgical Clinic at Jackson where the practice of members is limited to general and



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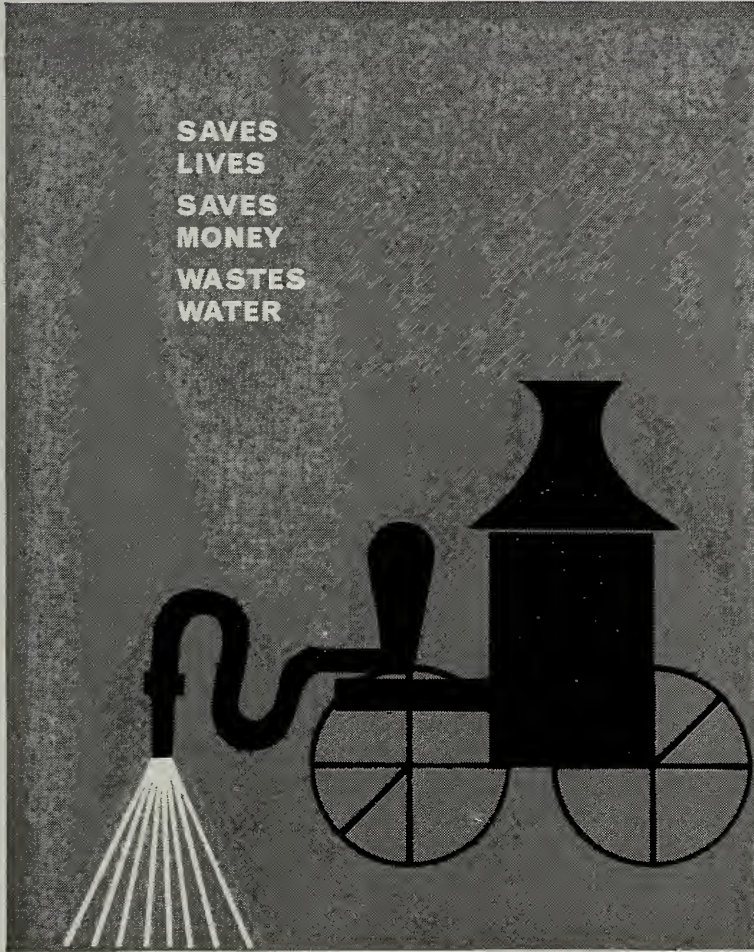
**Precautions:** As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

**Side Effects:** Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have occasionally been noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by the administration of thiazides.

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## PERSONALS / Continued

thoracic surgery. Clinic members include GEORGE E. TWENTE, J. HARVEY JOHNSTON, JR., W. CUPREY SHANDS, and JAMES C. GRIFFIN, JR.

GLENN B. RUFFIN of Laurel has taken leave of absence from his practice to enter a residency in psychiatry at the Tulane University School of Medicine at New Orleans. He has practiced at Laurel since 1953 and plans to resume practice in his specialty there upon completion of his training.

C. D. TAYLOR, JR., has been elected to the board of directors of the Pass Christian Chamber of Commerce. He is a member of the state medical association's Board of Trustees and currently serves as secretary of the governing body.



### NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

ESTESS, JOHN MURRAY, Florence. Born Hattiesburg, Miss., Sept. 10, 1937; M.D., University of Mississippi School of Medicine, Jackson, 1963; interned Mississippi Baptist Hospital, Jackson, one year; elected Sept. 6, 1966, by Central Medical Society.

McKEE, WILBUR EILERS, Leakesville. Born Toledo, Ohio, Nov. 23, 1900; M.D., Ohio State University College of Medicine, Columbus, 1930; interned Grant Hospital, Columbus, Ohio, one year; member, American Academy of General Practice; elected June 9, 1966, by South Mississippi Medical Society.

TUCKER, FRANK HOWARD, JR., Meridian. Born Canton, Miss., Feb. 15, 1936; M.D., University of Mississippi School of Medicine, Jackson, 1961; interned University of Mississippi School of Medicine, Jackson, one year; general surgery residency, University of Mississippi School of Medicine, Jackson; elected Oct. 3, 1966, by East Mississippi Medical Society.

WHITE, ELBERT ASA, III, Corinth. Born Corinth, Miss., July 17, 1935; M.D., Vanderbilt University School of Medicine, Nashville, Tenn., 1960; in-

terned Vanderbilt University Hospital, Nashville, Tenn., one year; surgery residency, Vanderbilt University Hospital, Nashville, Tenn.; pediatric residency, Vanderbilt University Hospital, Nashville, Tenn.; member, Aerospace Medical Association; diplomate of the American Board of Pediatrics; fellow of the American Academy of Pediatrics; elected Sept. 16, 1966, by Northeast Mississippi Medical Society.



### DEATHS

DARRINGTON, GILRUTH, Yazoo City. M.D., Tulane University School of Medicine, New Orleans, La., 1924; member, International College of Surgeons and the Southeastern Surgical Congress; died Oct. 10, 1966, aged 66.

PETRO, CAMAL PETER, Jackson. M.D., University of Tennessee College of Medicine, Memphis, 1951; interned Charity Hospital, New Orleans, La., one year; radiology residency, University of Mississippi School of Medicine, Jackson, three years; died Oct. 25, 1966, aged 44.

WEST, FRED KARR, Rossville, Tennessee. M.D., University of Tennessee College of Medicine, Memphis, 1911; died Oct. 3, 1966, aged 82.

## Corinth Hospital Seeks Expansion

The new Magnolia Hospital at Corinth is seeking an \$89,000 therapeutic radiology unit and a \$42,000 medical library. The plan was considered at a November meeting of Corinth city officials and the Alcorn County board of supervisors.

The proposal would include \$46,000 for x-ray and isotope radiation equipment and \$43,000 for additional construction. The unit would also provide cobalt therapy. The library addition is estimated at \$39,000 with an additional \$3,000 in furnishings.

C. W. Edge, president of the board of supervisors, was quoted as stating that the county had enough money remaining from the original bond issue to finance the nonfederal share. He said that the usual federal matching for hospital construction would be sought for the remainder.





### Book Reviews

**Heritable Disorders of Connective Tissue.** By Victor A. McKusick, M.D., Professor of Medicine, The Johns Hopkins University. 499 pages with illustrations. St. Louis: The C. V. Mosby Company, 1966. \$18.50.

Concealed behind a relatively unimpressive and, at first glance, unexciting title is an amazing collection of medical information about disorders which seem to stem from that little understood common denominator—connective tissue. For the first time in my own medical experience disorders such as Marfan's syndrome, homocystinuria, Hurler's syndrome, Ehlers-Danlos syndrome, alkaptonuria, pseudoxanthoma elasticum and osteogenesis imperfecta begin to show some semblance of order and reason, and they now assume much more importance than in their previous roles as interesting but rare medical curiosities.

The author, Dr. Victor A. McKusick, has done a masterful job of organizing a wealth of clinical and biological data into an easily readable volume that is complete with numerous excellent photographs, charts and diagrams. Dr. McKusick directs his treatise not specifically to geneticists and research biophysicists but more specifically to general practitioners, internists and pediatricians in the belief that these clinicians are best able to size up the total patient situation, review family backgrounds and appraise the significance of overall internal medical manifestations of these diverse but inter-related disorders.

The author proposes, and rightly so, that this book offers something of interest also to the ophthalmologist, orthopedist, surgeon, hematologist, gastro-enterologist, dermatologist, endocrinologist and pathologist for "connective tissue connects the numerous branches of medical science" (Asboe-Hansen). There is not one of the medical fields mentioned which is not touched by the vagaries of the connective tissue disorders. That these disorders are heritable, although not necessarily inherited, lends even greater interest to the subject.

This book does not supply all the answers about the diseases and syndromes involving connective tissue, but the author has done a superb task of bringing order out of chaos.

EUGENE M. MURPHEY, III, M.D.

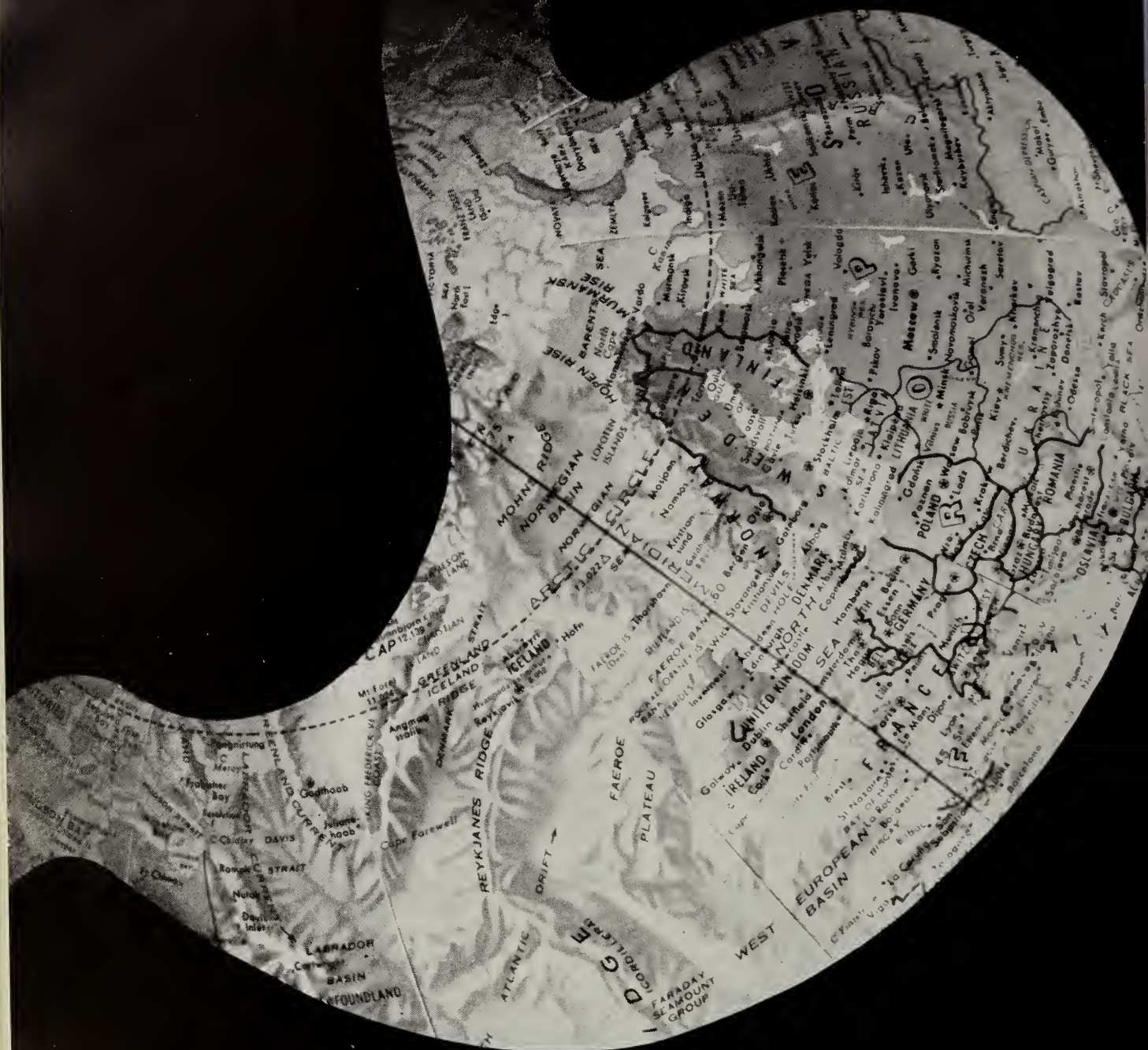
**Current Diagnosis.** Edited by Howard F. Conn, M.D.; Robert J. Cloherty, M.D.; and Rex B. Conn, Jr., M.D. 843 pages with illustrations. Philadelphia: W. B. Saunders Company, 1966. \$19.00.

It would be interesting to know how many existing volumes on medicine have begun, as does this one, with the old reliable disease, influenza. But this book is unique in its arrangement of reference material in the 770 pages that follow. The table of contents is well categorized and includes a span of systems and diseases not ordinarily incorporated into a single volume. For instance, it is unusual to have complete sections on Obstetrics and Gynecology, and Disorders of Newborn Infants and Children included in the same binding with complete internal medicine.

The list of 285 contributors includes many of the great names in medicine, and certainly each one is unexcelled in his specialty. They have prepared their presentations along uniform lines to help the reader find the desired answers easily. The Index of 68 pages is complete with cross references to diseases, signs, symptoms and findings discussed in the book, and it even suggests alternative diagnostic possibilities.

It has been refreshing to read an up-to-date reference book which could be of value to any physician. Special interest is found in newer terminology which describes conditions in easy to understand language such as "An ejection-type systolic murmur" describing the murmur of aortic stenosis. This is only one of many examples. The refreshing new part has as a companion the consolation of old and familiar material which restores faith to the reader who is a few years removed from medical school.

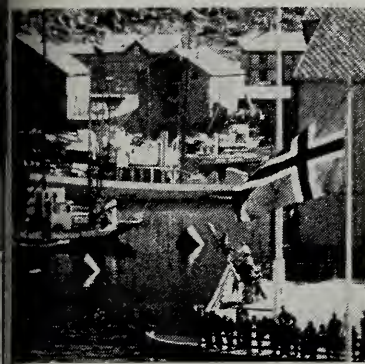
The discourse on obesity is an excellent discus-



# The “Socio- geographic” mystery



# Why is one man's gastric ulcer another man's duodenal?



**Geographic variation** in the *incidence* of peptic ulcer is a familiar fact. But the proclivity of certain *kinds* of ulcer for certain geographic areas is a recently recognized phenomenon.<sup>1,2</sup>

For example, in one particular Norwegian fishing village there is a tendency for patients to develop a gastric ulcer; anywhere else in Norway, ulcers are usually duodenal. Peruvians high in the Andes have more gastric ulcers than their compatriots in the lowlands. Why? Nobody knows.

**Social variations, too.** Even in the same geographic areas there are interesting variations. An Englishman's ulcer depends on his social standing—professional men suffer with duodenal ulcers, while workingmen have more of the gastric variety. In southern India the pattern is reversed. Here, duodenal ulcers are common among laborers and agricultural workers and rare among the upper classes.

Investigators are exploring every possible theoretical avenue in their search for the cause of peptic ulcer. Of all the factors implicated in ulcerogenesis, the one that is generally acknowledged to be of primary importance is hypersecretion of gastric acid.<sup>3-8</sup> Or, as one author states it: "The medical management of peptic ulcer pharmacologically is, in the final analysis, concerned largely with the effective inhibition of peptic activity."<sup>3</sup>

Robinul (glycopyrrolate) provides potent, rapid, specific antisecretory action confirmed by gastric analyses and x-ray evidence of clinical effectiveness.<sup>3,7,9-12</sup> Relieves pain with "impressive" promptness.<sup>8</sup> Quickly alleviates acute discomfort, and effectively counteracts gnawing pain, preprandial midepigastic pain, belching and other ulcer symptoms.<sup>7</sup> Suppression of nocturnal pain is "outstanding."<sup>13</sup> Maximally effective doses may be given with minimal side reactions, and the incidence of unwanted anticholinergic effects is negligible.<sup>3,7-14</sup>

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*(brief summary follows)*

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essential ulcer-healing  
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**Indications:** In addition to its primary indications for duodenal and gastric ulcer, Robinul (glycopyrrolate) is indicated for other GI conditions that may benefit from anticholinergic therapy. Robinul-PH Forte (glycopyrrolate 2 mg. with phenobarbital) is indicated when these situations are complicated by mild anxiety and tension.

**Contraindications:** Glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric retention, prostatic hypertrophy, duodenal obstruction, cardiospasm (megaesophagus), and achalasia of the esophagus, and in the case of Robinul-PH Forte, sensitivity to phenobarbital.

**Precautions:** Administer with caution in the presence of incipient glaucoma.

**Adverse Reactions:** Dryness of the mouth, blurred vision, urinary difficulties, and constipation are rarely troublesome and may generally be controlled by reduction of dosage. Other side effects associated with the use of anticholinergic drugs include tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsiness, and rash.

**Dosage:** Dosage should be adjusted according to individual patient response. Average and maximum recommended dose is 1 tablet 3 times a day: in the a.m., early p.m., and at bedtime. *See product literature for full prescribing information.*

**Supply:** Robinul (glycopyrrolate 1 mg.); Robinul Forte (glycopyrrolate 2 mg.); Robinul-PH (glycopyrrolate 1 mg.) with phenobarbital 16.2 mg. (Warning: May be habit-forming); Robinul-PH Forte (glycopyrrolate 2 mg.) with phenobarbital 16.2 mg. (Warning: May be habit-forming.) In bottles of 100 and 500 scored tablets.

**References:** 1. Jones, F. A., and Gummer, J. W. P.: Clinical gastroenterology, Springfield, Ill., Charles C Thomas, 1960, pp. 322-3. 2. Bockus, H. L.: Gastroenterology, 2nd ed., vol. I, Philadelphia, Saunders, 1963, p. 468. 3. Sun, D. C. H.: Ann NY Acad Sci 99:153 (Feb. 28) 1962. 4. Moore, V. A.: Postgrad Med 38:216 (Sept.) 1965. 5. Dragstedt, L. R., Woodward, E. R., Storer, E. H., Oberhelman, H. A., Jr., and Smith, C. A.: Ann Surg 132:626 (Oct.) 1950. 6. Posey, E. L., Jr., Smith, P., Turner, C., and Aldridge, J.: Amer J Dig Dis 10:399 (May) 1965. 7. Lamphier, T. A., Siegel, L., and Goldberg, R. I.: Amer J Gastroent 37:551 (May) 1962. 8. Kasich, A. M., and Fein, H. D.: Ibid 39:61 (Jan.) 1963. 9. Epstein, J. H.: Ibid 37:295 (Mar.) 1962. 10. Moeller, H. C.: Ann NY Acad Sci 99:158 (Feb. 28) 1962. 11. Slinger, A.: J New Drugs 2:215 (Jul.-Aug.) 1962. 12. Barman, M. L., and Larson, R. K.: Amer J Med Sci 246:325 (Sept.) 1963. 13. Shutkin, M. W.: Amer J Gastroent 38:682 (Dec.) 1962. 14. Fleshler, B.: J New Drugs 2:211 (Jul.-Aug.) 1962. **A. H. ROBINS CO., INC.**  
Richmond, Virginia

sion of the subject and is especially recommended for pleasure as well as knowledge.

The book has been a rewarding review for this reader.

JOHN C. LONGEST, M.D.

Pathology, Volume I and II, Fifth Edition. Edited by W. A. D. Anderson, M.D., Professor of Pathology and Chairman of the Department of Pathology, University of Miami School of Medicine. 1,439 pages with illustrations. St. Louis: The C. V. Mosby Company, 1966. \$21.00.

This is the fifth edition of a popular pathology reference. Thirty-nine outstanding pathologists have revised and in some instances rewritten the forty-three chapters. There is now a separate chapter on the Pathology of Congenital Heart Disease with emphasis on the mechanisms and hemodynamics. The sections on the lung, heart, blood vessels, diabetes mellitus, gastro-intestinal tract and pancreas as well as the sections on tuberculosis, leprosy, spirochetal, venereal diseases, protozoal, and helminthic diseases have been completely rewritten. Each collaborator covers the area or aspect of pathology that he knows best, in the way that he prefers to present it. All have incorporated recent advances in genetics, histochemistry, electron microscopy, chemotherapy, etc., that have bearing on knowledge of disease processes.

The physical layout of the book is quite similar to the fourth edition except that the fifth edition is in two volumes. Some of the illustrations and photographs have been re-used. The bibliographies at the end of each chapter have been revised and brought up-to-date.

This edition will continue to serve as a dependable reference for students of pathology and those of other specialties as well as pathologists.

CATHERINE G. GOETZ, M.D.

## Medicare's Hess Undergoes Surgery

The chief of Medicare, Arthur E. Hess of Baltimore, director of the Bureau of Health Insurance, underwent elective surgery and will be absent from his duties for an extended period of time.

The Social Security Administration said that Howard L. Bost, Ph.D., the deputy director, would serve as acting director during Hess' absence. Headquarters for BHI is in the Social Security Administration complex at Baltimore.



# State Morbidity Reported Through October 28

The Mississippi State Board of Health reports the following occurrence of morbidity for 1966 through the 43rd week of the year, ending Oct. 28. Case totals are shown opposite the disease condition.

Tuberculosis, pul. ....	730
Tuberculosis, O.F. ....	46
Dysentery, bac. ....	75
Dysentery, amebic ....	6
Salmonella, inf. ....	35
Brucellosis ....	13
Diphtheria ....	7
Meningitis, men. ....	20
Meningitis, O.F. ....	81
Mononucleosis, inf. ....	28
Myelitis ....	6
Encephalitis, inf. ....	15
Tetanus ....	7
Hepatitis, inf. ....	265
Meningococemia ....	4
Diarrhea of the newborn ....	4
Helminthic infections	
Hookworm ....	771
Ascariasis ....	385
Strongyloides ....	73
Taeniasis ....	19
Streptococcus infections	
Strep throat ....	3,229
Scarlet fever ....	44
Malaria, vivox ....	3
Mumps ....	286
Measles ....	1,012
Influenza ....	814
Chickenpox ....	241
Toxoplasmosis ....	1
Tularemia ....	4
Coccidiomycosis ....	1
Histoplasmosis ....	6
Polyneuritis ....	1
Rheumatic fever ....	4
Septicemia of the newborn ....	5
Syphilis	
Early ....	588
Late ....	116
Gonorrhea ....	3,985
Rabies in animals	
Bats ....	21

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## Breast-feeding and the “modern mother”

Despite a mild resurgence of interest in the importance of breast-feeding a few years ago, many women today do not choose to nurse their young. This is for a variety of reasons—social, economic, cultural and sometimes medical. In such cases the physician's task is to find the most suitable means of preventing lactation and easing the pain of breast engorgement.

### The means of therapy

The value of hormone therapy for this indication is of course well established. Both androgen and estrogen are known to inhibit the production and secretion of the lactogenic hormone by the anterior pituitary. As estrogen levels decline sharply at parturition, lactogenesis is established. When androgen and estrogen are administered to the patient before the release of the lactogenic hormone lactation and breast engorgement are usually prevented.

### The time of therapy

The time of administration of this combined medication is crucial; it must be given early enough to suppress the pituitary prolactin and last long enough to permit physiologic readjustment during the puerperium. Excellent results are most often seen when therapy is administered before the onset of the second stage of labor.

However, factors other than effectiveness must also be considered. The agent selected should not interfere in any way with parturition, subsequent uterine involution and the restoration of normal ovarian cyclic function. Furthermore, it should not cause rebound breast engorgement or other manifestations of hormonal imbalance.

### A balanced formulation

Providing single-dose therapy for the prevention of lactation and breast engorgement, Deladumone OB is a potent androgen-estrogen combination with a prolonged action. The optimal balance of androgenic and estrogenic hormones achieved in this preparation minimizes the disadvantages inherent in single hormone therapy, such as rebound breast engorgement. Involution of the uterus and resumption of menstrual cycles are not affected.

As reported in a recent published study (Roser, D. M.: *Obstet. & Gynec.* 27:73, 1966), Deladumone OB provided good suppression of breast engorgement in 95.3% and suppression of lactation in 81.1% of 86 obstetrical patients. These results are in general agreement with those of many earlier investigations; in several studies this injectable androgen-estrogen combination proved to be superior to oral medication.

### Dosage:

As a single injection of 2 cc. before the onset of the second stage of labor.

### Contraindications:

Established or suspected mammary cancer or genital malignancy.

### Precautions and Side Effects:

Certain patients may be unusually responsive to either estrogenic or androgenic therapy. In such individuals virilization, uterine bleeding or mastodynia may occur.

### Supply:

Deladumone OB, providing 180 mg. testosterone enanthate and 8 mg. estradiol valerate per cc., is available in 2 cc. Unimatic® disposable syringes and in 2 cc. vials. Both preparations are dissolved in sesame oil, with 2% benzyl alcohol as a preservative. *Before use, consult product literature for full prescribing information.*

## Deladumone® OB

Squibb Testosterone Enanthate (180 mg./cc.) and Estradiol Valerate (8 mg./cc.)

**Single-dose injection for lactation inhibition**

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# Voluntary Prepayment, Insurance Show Growth Despite Government Programs

Twenty-six states have at least 75 per cent of their populations protected by some form of voluntary prepayment or health insurance plan, according to data released by the Health Insurance Institute, socioeconomic study arm of the private insurance industry.

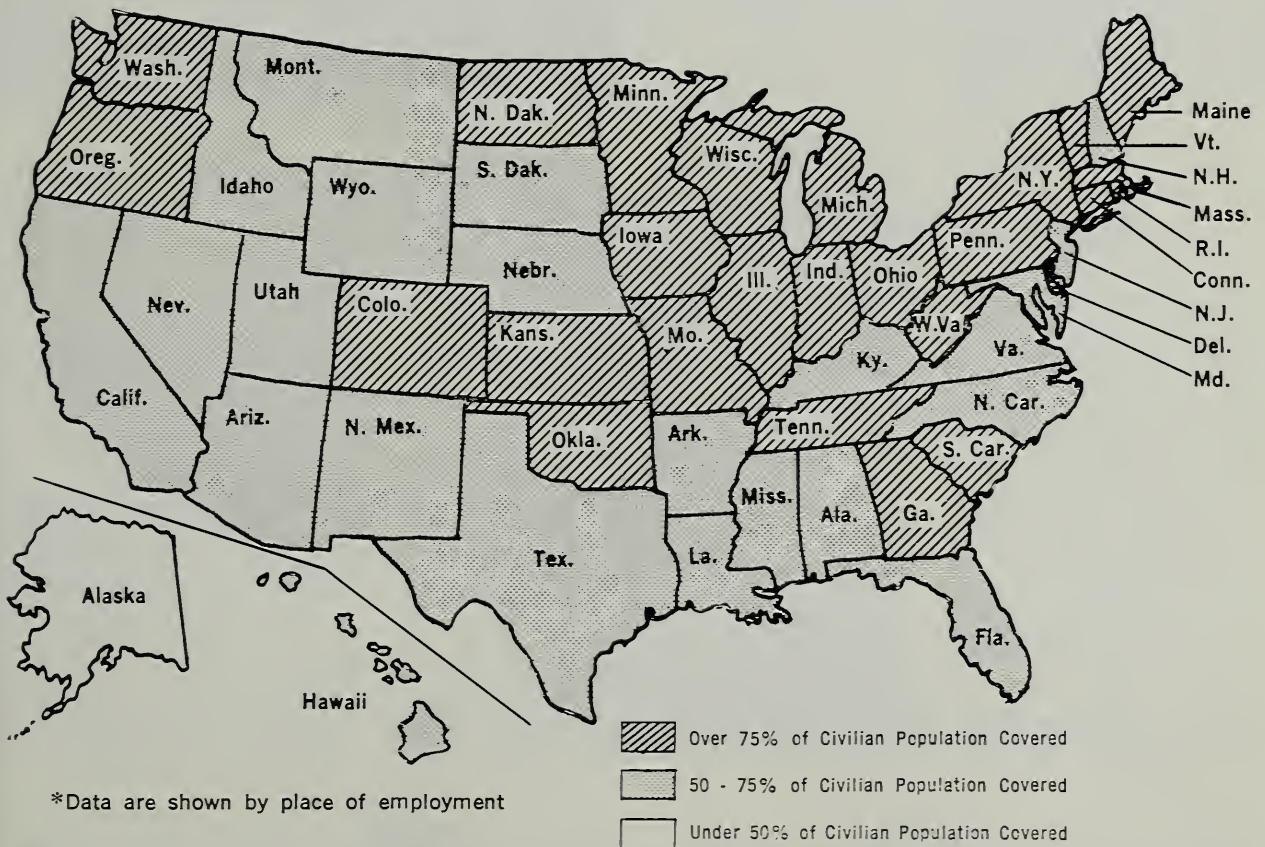
At the beginning of this year, another 23 states had between 50 and 75 per cent population coverage.

Alaska, said the institute, was the only state below the 50 per cent mark (44 per cent).

The nation as a whole had 81 per cent of the civilian population protected under some form of private health insurance provided by insurance companies, Blue Cross, Blue Shield, and other health care expense plans.

The institute said its report was based on the Health Insurance Council's 20th Annual Survey on the extent of voluntary health insurance in the United States in 1965. Survey data was compiled according to place of employment.

Insurance companies, government agencies and



Map of the United States shows percentage of population by states with some form of voluntary prepayment or private health insurance protection. The Gulf South falls in the 50 to 75 per cent strata.

## ORGANIZATION / Continued

published Blue Cross, Blue Shield reports, were sources for the Council's statistics.

Percentage of population coverage by region is as follows:

New England—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut—88 per cent protected.

Middle Atlantic—New York, New Jersey and Pennsylvania—91 per cent.

East North Central—Ohio, Indiana, Illinois, Michigan and Wisconsin—89 per cent.

West North Central—Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska and Kansas—82 per cent.

South Atlantic States—Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida and District of Columbia—77 per cent.

East South Central—Kentucky, Tennessee, Alabama and Mississippi—69 per cent.

West South Central—Arkansas, Louisiana, Oklahoma and Texas—67 per cent.

Mountain—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah and Nevada—67 per cent.

Pacific—Washington, Oregon, California, Alaska and Hawaii—76 per cent.

## Thefts of Narcotics Rises, BN Chief Says

During the 12 month period ending Dec. 31, 1965, the most recent date for which complete data are available, there were 2,503 reported thefts of narcotic drugs among all classes of registrants under the federal narcotic laws. This was the statement of Henry L. Giordano, U. S. Commissioner of Narcotics.

Giordano's statement said that the thefts accounted for the loss of 132.86 kg. (292.9 lbs.) of narcotic drugs.

The commissioner said that "although most registrants provide adequate safeguards for their narcotic stocks, some registrants do not, and the increase in thefts leads us again to issue a warning that continued vigilance must be exercised and secure places of storage provided for narcotic stocks."

The statement said that the 1965 thefts are the largest ever reported in a single year. Manufacturers and wholesale drug houses were especial-

ly singled out in the warning, and one theft of several thousand morphine tablets and ampules from a wholesaler was cited.

Giordano said that a Bureau of Narcotics circular prescribing the standards for safeguarding the various classes of narcotics is available to registrants on request.

## New Ob-Gyn Chief Is Named for UMC

Dr. Henry A. Thiede of Rochester, N. Y., will become professor and chairman of the Department of Obstetrics and Gynecology of the University of Mississippi School of Medicine on Jan. 1. He was named to the chair as its second occupant by the Board of Trustees of Institutions of Higher Learning.

Dr. Thiede, now associate professor of obstetrics and gynecology at the University of Rochester School of Medicine, succeeds Dr. Michael Newton who served from the opening of the four year school in 1955 until July 1, 1966. Dr. Newton is now director of the American College of Obstetrics and Gynecology with headquarters at Chicago. Dr. James L. Royals of Jackson, clinical associate professor, has been serving as acting department chairman.

The new chairman received his premedical training at the University of Rochester and his M.D. degree from the University of Buffalo School of Medicine in 1949. His internship was served at the Buffalo General Hospital and his residency, at Genesee Hospital and Strong Memorial Hospital at Rochester.

He first joined the faculty of the University of Rochester School of Medicine in 1957 and rose to his present academic rank in 1964.

Dr. Thiede is a fellow of the American College of Obstetrics and Gynecology, and a member of the Society for Gynecologic Investigation, the American Society of Humane Genetics, Sigma Xi, his county and state medical societies in New York, and AMA. In 1959, he was the recipient of a Foundation Award of the American Association of Obstetricians and Gynecologists.



*Dr. Thiede*

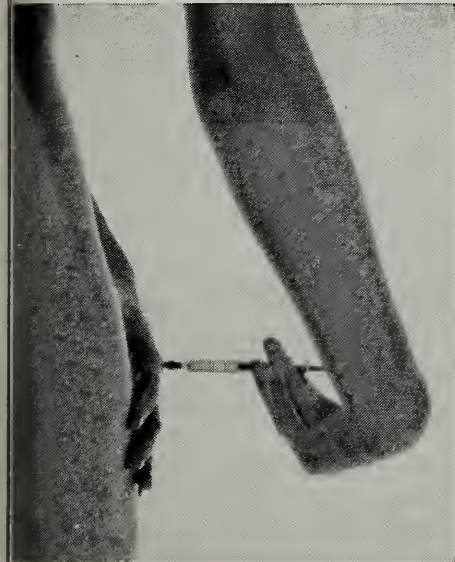


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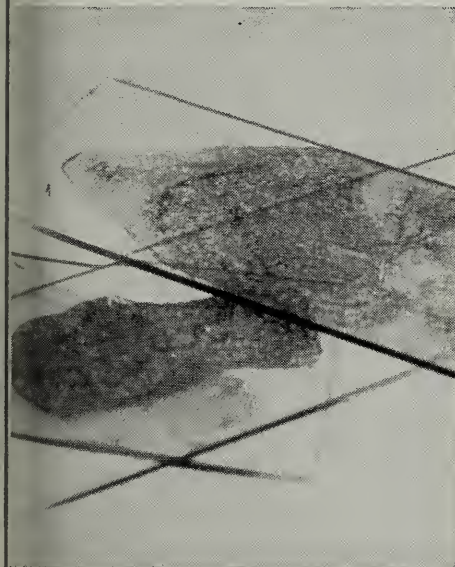
2. nonpregnant women with a history of recent or recurrent monilial vaginitis



3. elderly or debilitated patients



4. patients with a past history of moniliasis



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**BRISTOL THERAPEUTIC SUMMARY:** For complete information consult Official Package Circular. **Indications:** Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms, in patients with increased susceptibility to monilial infections. **Contraindications:** The drug is contraindicated in patients hypersensitive to its components. **Warnings:** Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood). **Precautions:** Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months. **Adverse Reactions:** Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur. **Usual Adult Dosage:** 1 capsule *q.i.d.* Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals. **Supply:** Capsules, bottles of 16. Each capsule contains tetracycline phosphate complex equivalent to 250 mg. tetracycline HCl activity and 250,000 units of nystatin.

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## Ole Miss Alumni Name Dr. Nelson

Dr. Howard A. Nelson of Greenwood was named president of the University of Mississippi Alumni Association during the group's annual business meeting at the Ole Miss Homecoming. He succeeds R. D. Wilcox of Laurel, the 1965-66 president.

Other 1966-67 officers are W. E. Wilroy of Hernando, vice president; Mitchell Salloum of Gulfport, athletic representative; William S. Griffin of the University, director of alumni activities; William Price of Jackson, medical alumni secretary; and James Butler of the University, alumni secretary.

Highlights of the homecoming occasion was the Ole Miss-University of Southern Mississippi game and the crowning of Miss Pat Horne of Jackson as homecoming queen. State officials and members of the legislature were honored at a reception and luncheon in the Paul B. Johnson Commons.



*Dr. Howard A. Nelson, second from left, is congratulated by Chancellor J. D. Williams after election as Ole Miss Alumni president. At the left is Dr. W. Alton Bryant, vice chancellor of the university. R. D. Wilcox of Laurel, outgoing alumni president, is at the right.*

Dr. Nelson, a past president of the state medical association and long time medical leader, has served as president of the Ole Miss Medical Alumni and as vice president of the general alumni association.

## 'Emotions in Medicine' Is Theme of Meet

The University Medical Center's Department of Psychiatry and Postgraduate Education Committee will cooperate in presenting a seminar Dec. 15 on "Emotions in Medicine."

Registrants will be welcomed by Dr. Floy J. Moore, professor of psychiatry and chairman of the University Medical Center's department, and will hear a morning address by Dr. William J. Erwin, assistant professor of psychiatry, on suicide as a general problem.

UMC faculty participating in a panel discussion on the role of psychiatry in the general practice of medicine include: Dr. L. C. Hanes, associate professor; Dr. Robert M. Ritter, clinical instructor; Dr. Joseph E. Roberts, assistant professor and program coordinator, and Mr. George W. Letherwood, social worker.

Highlighting the seminar will be a workshop conducted by Dr. Allen J. Enelow, director of the Postgraduate Division, Department of Psychiatry, University of Southern California, which will stress the value of psychiatric understanding in medical interviews. Following an interview conducted by Dr. Roberts, Dr. Enelow will evaluate and analyze the results, stressing the doctor-patient relationship and nonverbal communication.

## Trophoblastic Neoplasm Center Opened at Duke

The Duke University Department of Obstetrics and Gynecology has announced the establishment of the Southeastern Regional Center for Trophoblastic Neoplasms. The project is sponsored by the university under a health service grant award from HEW's Division of Chronic Diseases.

Duke officials said that the project in cancer control was established for the purpose of providing urinary gonadotropin assays and consultative assistance to physicians as an aid in their evaluation of patients who have or are suspected of having abnormalities in trophoblastic tissue growth.

The announcement said that physicians desiring gonadotropin assays for patients with placental abnormalities as molar degeneration, hydatidiform mole, syncytial endometritis, chorio-adenoma destruens, and choriocarcinoma may call or write the center at Duke.



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**Contraindications:** Dextro-amphetamine sulfate: in hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.

**Precautions:** Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side Effects:** Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.



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## MAGP Names Bolton, Johnston As Leaders

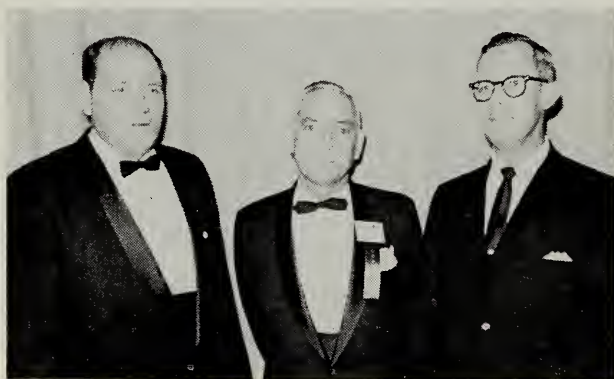
Dr. Joseph E. Johnston of Mount Olive was named president-elect of the Mississippi Academy of General Practice as Dr. Eldon L. Bolton of Biloxi was installed as the 1966-67 president. The actions came at the Academy's 18th Annual Scientific Assembly at Jackson, Oct. 18-20.

Dr. Bolton succeeds Dr. Max L. Pharr of Jackson who served as the 1965-66 president.

The three-day meet was attended by 250 registrants, including 150 physicians. Headquarters for the scientific sessions, exhibits, and business meeting was the Hotel Heidelberg.

Named to other top elected posts for the coming year were Drs. C. R. Jenkins of Laurel, vice president; and Ben F. Banahan, Jr., of Jackson, secretary-treasurer.

Dr. J. Roy Bane of Jackson was elected delegate to the AAGP to succeed Dr. William E. Lotterhos of Jackson who was named to the national board of directors at the recent AAGP convention at Boston. Dr. John B. Howell, Jr., of Canton was re-elected a delegate, and Dr. Robert J. Moorhead of Yazoo City was named alternate delegate.



*Three years of the MAGP presidency are represented by, from the left, Drs. Max L. Pharr, immediate past president; Eldon L. Bolton, incumbent president; and Joseph E. Johnston, president-elect.*

New directors named by the Mississippi Academy are Drs. Ernest E. Ellis of Laurel, Maxwell D. Berman of Jackson, James W. Allison, Jr., of Vicksburg, John C. Longest of Starkville, and William B. Howard of Pontotoc.

Social and fellowship highlights of the meet were the banquet and membership luncheon. At

the latter, Mrs. John B. Howell, Jr., of Canton presented an illustrated lecture on "Medicine and Flowers." An authority in botanicals as relate to medicine, Mrs. Howell has lectured to national and state groups.

Both out-of-state and local essayists appeared on the scientific program. Dr. Robert J. Moorhead served as program chairman with Dr. Edgar E. Bobo of Jackson heading the scientific exhibits committee and Dr. Clifton L. Hester, Jr., of Raymond chairing the technical exhibits.

## Medical Society Flays Football Coaches

An Alexandria, La., orthopaedic surgeon who is president of the Rapides Parish Medical Society has charged that Louisiana high school football coaches are endangering the health of their players by attempting to diagnose athletic injuries.

Dr. Daniel M. Kingsley said that the statement was prompted by the death of 16 year old Robert Mogabgab who died of heat exhaustion. The youth was the son of another physician, Dr. William J. Mogabgab.

Dr. Mogabgab was quoted as saying that the coaches permitted the boy to lie unconscious for two hours without calling for medical assistance. He has asked that the Louisiana State Medical Society join in an investigation to study the problem of health regulations to be followed by high school coaches for the protection of athletes.

Dr. Kingsley charged that some coaches, in their zeal to win, disregard possible permanent injuries to developing bones and joints and unwisely permit such previously injured boys to play again. He said that a coach asked an Alexandria family to forbid their son's seeing a physician after the boy was injured playing football.

Following the airing of Dr. Kingsley's charges, the school superintendent appointed a committee of nine physicians to investigate the circumstances of the Mogabgab boy's death. It was stated that any action by the state medical society would be apart from the investigation of the nine member committee of physicians, but the school superintendent, Carl J. Dolce, said that "a statewide study might be beneficial."

Dr. Kingsley said that he "did not think that the parents of these boys (football players) would stand for what goes on if they just knew about coaches trying to be doctors."



## Blue Plan Executive Urges Better Job

Private health insurance and prepayment plans (Blue Shield) must do a better job than government or face the possibility of a takeover. This was the statement of John McCabe, executive director of Michigan Blue Shield, in an address at the annual session of the Michigan State Medical Society.

"Efforts must be redoubled with greater aggressiveness and creativity if the private, voluntary prepayment system of paying the costs of medical care is to flourish," McCabe asserted.

"Let there be no doubt that it can flourish only if it does a better job in every sense than government," he warned. "Mere words will not suffice."

McCabe said that the private sector must improve its benefit programs to eliminate gaps which will otherwise provide fertile ground for further government involvement.

"The success of Michigan Blue Shield depends to a great extent on the support and cooperation of the medical profession," he added.

## Mid-Winter Circuit Courses Are Scheduled

The University of Mississippi Medical Center will continue to sponsor postgraduate education for state physicians with seven circuit course lectures scheduled for January.

Lecturers from UMC will travel to Biloxi on Jan. 4 and to Hattiesburg on Jan. 5 to talk on valvular heart disease. Dr. Harper K. Hellems, professor of medicine and chairman of the department, will discuss medical considerations, and Dr. James Hardy, professor of surgery and chairman of the department, will speak on the surgical approach to the condition.

The second sessions for the southern circuit will be held in Biloxi on Jan. 11 and in Hattiesburg on Jan. 12 when the topic will be duodenal ulcer. Current medical management will be presented by Dr. Lidio O. Mora, clinical associate professor of medicine, and advances in surgical management of duodenal ulcer will be the subject of a lecture delivered by Dr. William O. Barnett, associate professor of surgery.

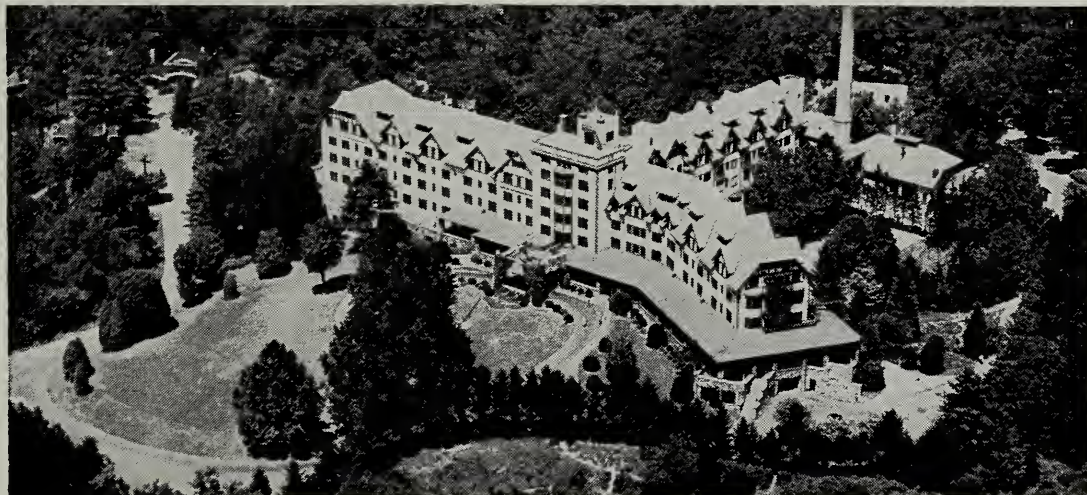
Final sessions for Biloxi and Hattiesburg will

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## ORGANIZATION / Continued

be held on Jan. 18 and 19 with Dr. Herbert G. Langford, professor of medicine and associate professor of physiology, discussing medical management of hyperthyroidism. At these same meetings, Dr. J. Harvey Johnston, Jr., clinical associate professor of surgery, will speak on medical management of hyperthyroidism.

Hypertension in children and adults will be the subject of a Jan. 24 circuit course scheduled for physicians in the Columbus area. Lecturers will be Dr. Jose Montalvo, assistant professor of pediatrics, and Dr. Langford.

### Dr. McCracken Lectures at Southern

Dr. Brian H. McCracken of New Orleans, professor and chairman of the Department of Physiology at the Tulane University School of Medicine, lectured on the medical aspects of nutrition at the University of Southern Mississippi on Oct. 26. Dr. McCracken's lecture was jointly sponsored by the American Medical Association, the Mississippi State Medical Association, and the USM Department of Biology.



*Special lecturer at the University of Southern Mississippi, Dr. Brian H. McCracken, right, was introduced by Dr. J. P. Culpepper, Jr., left. Dr. J. Fred Walker of USM, center, presided.*

The lecturer was introduced by Dr. J. P. Culpepper, Jr., of Hattiesburg who represented the association's Council on Scientific Assembly. Dr. J. Fred Walker, chairman of the university's sponsoring department, presided.

The special occasion was attended by biology and home economics majors, by health and physical education graduate students, and by students from nearby William Carey College and the Hattiesburg High School.

### Dr. Pankratz Gets AAMC Emeritus Degree

Dr. David S. Pankratz of Memphis, who for 22 years was associated with the University of Mississippi School of Medicine, has been elected to emeritus membership in the Association of American Medical Colleges. He was nominated for the high honor, accorded only to four medical educators in 1966, by another former dean at Ole Miss, Dr. Robert Q. Marston.



*Dr. Pankratz with "Missy" award.*

Emeritus membership in AAMC is reserved "for those men who have distinguished themselves in dealing with problems of and in contributing to the progress of medical education."

Dr. Pankratz has been associated with the Gailor Psychiatric Hospital at Memphis since his retirement as dean of the medical school and director of the medical center at Jackson in 1961. He is a holder of the University of Mississippi-First Federal Foundation's "Missy" award for distinguished service to the state.

Other medical education leaders named to the honorary membership degree are Drs. Joseph C. Hinsey, director emeritus of Cornell University Medical Center; Robert A. Moore, president emeritus of the State University of New York Downstate Medical Center; and Joseph M. Hayman, Jr., dean emeritus of Tufts University School of Medicine.

In the nomination of Dr. Pankratz, the then-dean of UMC, Dr. Marston, said that "it is typical of Dr. Pankratz that, faced with mandatory retirement in 1963, he chose to step aside from his top administrative post early to prepare himself for a new area of service to medicine."

The nomination also singled out Dr. Pankratz as being "largely responsible for the establishment of the four-year school and University Medical



Center which he guided in its early, formative years.”

Dr. Pankratz joined the two-year school faculty at Oxford in 1939 and became dean in 1945. He was a leader in the planning and construction of the medical center complex at Jackson, becoming its director in 1954. He was honored upon his retirement when a Karl Wolfe portrait of him was presented to the medical school.

Active in civic and volunteer health organization while in Mississippi, Dr. Pankratz served as president of the Mississippi Division of the American Cancer Society, as a director of the Mississippi Heart Association and of the Mississippi Association for Mental Health.

## Resuscitation Course Set by MHA, UMC

Fourteen representatives from Mississippi’s district heart associations will undergo intensive training in cardiopulmonary resuscitation at the University Medical Center on Dec. 16 when the Mississippi Heart Association holds its first course.

Criteria for attendance at the first course will include a willingness to plan and teach similar courses sponsored by district and county heart associations. The departments of surgery and anesthesiology at the University of Mississippi School of Medicine cooperate in presenting the seminar which will feature one-to-one training on manikins in which the human breathing system has been simulated.

## Dr. Fabian Is Named to Posts in ACA, ASA

Dr. Leonard W. Fabian, professor and chairman of the Department of Anesthesiology of the University of Mississippi School of Medicine, has been elected chairman of the Board of Governors of the American College of Anesthesiologists.

In addition, Dr. Fabian is serving as general program chairman for the 1967 annual meeting of the American Society of Anesthesiologists. He has recently been appointed to a three year term as one of two consultants in anesthesiology to the Department of the Air Force.

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## Mosquito Influx Plagues Gulf Coast

The Gulf Coast Mosquito Control Commission reports that the influx of mosquitoes from the offshore islands has been so severe as to require the commission to dig into next year's funds to pay for fogging.

Commission Director Chris Elmore said that the commission is again considering requesting permission from the U. S. Fish and Wildlife Commission to treat the offshore islands, particularly Horn and Petit Bois islands, with a strong chemical insecticide. He said that a similar request was denied several years ago because of fear for harmful effects upon wildlife.

Long a problem for Coast residents, the mosquitoes from both the off-shore islands and the Louisiana salt marshes also concern public health officials.

## Mental Care Complex Plan Is Moving

At least 22 of the state's 82 counties are working toward improved services for their mentally ill and mentally retarded, the program director of the Mississippi Interagency Commission said.

Dr. Dorothy N. Moore said, "We have been overwhelmed by the interest shown at the local level in the development of regional programs based upon state laws passed earlier this year."

The commission brings together the executive officers of the five state agencies involved in programs for the mentally ill and retarded or in training the personnel working in these fields. The 1966 legislature created the commission and passed a law authorizing counties to form regional commissions and to levy up to two mills tax support for regional facilities and services for the mentally ill and retarded.

Dr. Moore said seven northeastern counties (Benton, Chickasaw, Itawamba, Monroe, Lee, Pontotoc and Union) have authorized a half-mill tax for a program for the mentally ill and retarded in that area. She said six north-central counties (Calhoun, De Soto, Lafayette, Marshall, Panola and Yalobusha) have passed resolutions endorsing a joint effort and are conducting meetings to discuss needs of the area.

Dr. Moore said an interagency group is now studying the needs of the mentally ill and retarded in the Hinds county area. Other groups are at work in Harrison, Forrest, Coahoma and Washington counties. She said the Oktibbeha-Lowndes area and the Pike-Lincoln section also have been in touch with the Mississippi Interagency Commission expressing interest in local action.

The Mississippi Interagency Commission on Mental Illness and Mental Retardation is the agency authorized to assist local program planning and to coordinate state-level planning. The commission is made up of the executive officers of the State Board of Health, Department of Education, Department of Public Welfare, Board of Mental Institutions and Board of Institutions of Higher Learning.

Federal funds totalling almost \$2,000,000 are available to Mississippi communities to pay for two-thirds of the cost of building mental health or mental retardation facilities if existing facilities do not suffice.

"We hope, however," said Dr. Moore, "that local communities will consider the need for services and personnel first—not buildings. The need for psychiatrists, psychologists, social workers and nurses is urgent."

Dr. Moore said federal grant funds are available for partially staffing new community mental health services for five years, after which such services must be financed without federal funds.

"Many local and regional groups consider federal funds necessary," said Dr. Moore, "since no state funds have been ear-marked to match local financing."

## Millsaps Is Host for Instrumentation Meet

Millsaps College at Jackson was host for a symposium on instrumentation jointly sponsored by the Mississippi Association of Pathologists and the Mississippi Society of Medical Technologists. The symposium was conducted Oct. 28-29.

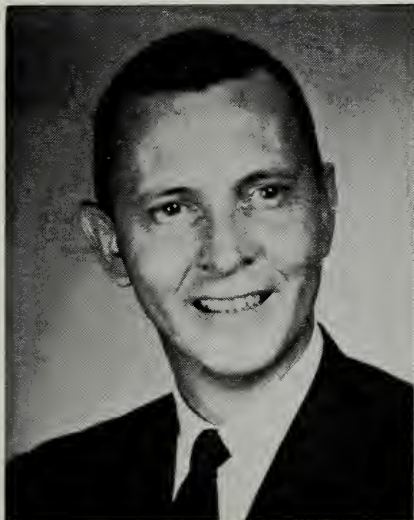
The first day's session was designed to benefit members of the college faculty in the biological and zoological sciences, students, and staff. Representatives of seven instrument manufacturers presented lectures. Saturday sessions were for professional personnel.

Instrumentation and equipment demonstrated and displayed included photometers, pH analyzers, fluorometers, various types of microscopes, and blood counting apparatus.

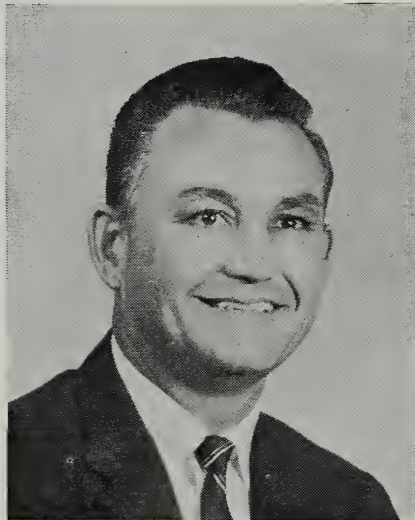


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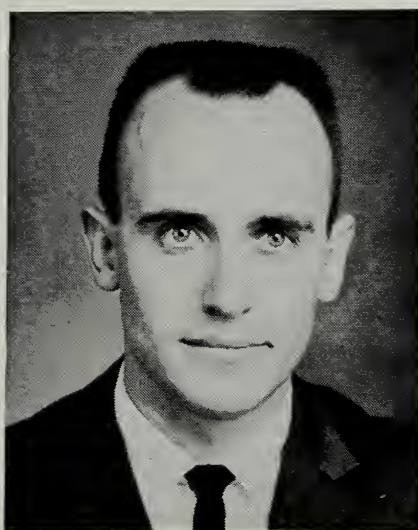
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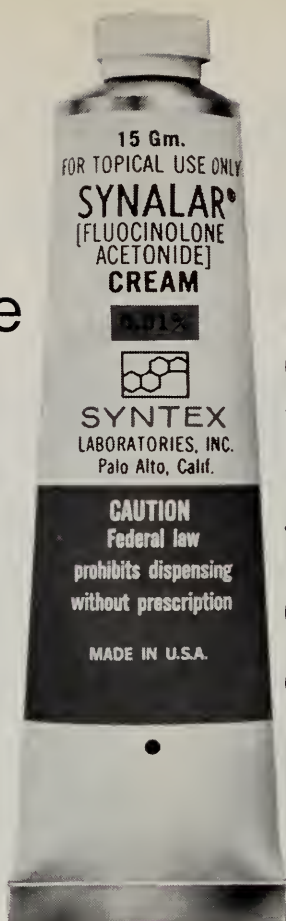
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The letters used to explain in which department the matter indexed appears are as follows: "E," Editorial; "N," News; "L," Letters to the Editor; "BR," Book Reviews; the asterisk (\*) indicates an original article in the JOURNAL, and the author's name follows the entry in brackets. "Deaths," "Personals," and "New Members"

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